

FIG. 1

SEQ ID 1 D58-BG7
1 GCACAACCTT GCTATCAACT TGGTCACATC TATGTTGGGT
61 CATTTGTTGC ATCATTTTAC ATGGGCTCCG GCCCCGGGGG TTAACCCGGA GGATATTGAC
121 TTGGAGGAGA GCCCTGGAAC AGTAACTTAC ATGAAAAATC CAATACAAGC TATCCAACCT
181 CCAAGATTGC CTGCACACTT GTATGGACGT GTGCCAGTGG ATATGTAA
SEQ ID 2
AQLAINLVTSMLGHLHHFTWAPAPGVNPEIDLEESPGTVTYMKNPIQAIPTPRLPAHLYGRVPVDM

FIG. 2

SEQ ID 3 D58-AB1
1 GCACAACCT TGCTATCAAC TGGTCACAT CTATGTTGGG
61 TCATTTGTTG CATCATTTTA CGTGGGCTCC GCCCCGGGGG GTTAACCCGG AGAATATTGA
121 CTTGGAGGAG AGCCCTGGAA CAGTAACTTA CATGAAAAAT CCAATACAAG CTATTCCTAC
181 TCCAAGATTG CCTGCACACT TGTATGGACG TGTGCCAGTG GATATGTAA
SEQ ID 4
AQLAINLVTSMLGHLHHFTWAPPGVNPENIDLEESPGTVTYMKNPIQAIPTPRLPAHLYGRVPVDM

FIG. 3

SEQ ID 5 D186-AH4
1 ATGAATTAT TCATTGCAAG TGAACACCT TTCAATTGCT
61 CATATGATCC AAGGTTTCAG TTTTGCAACT ACGACCAATG AGCCTTTGGA TATGAAACAA
121 GGTGTGGGTT TAACCTTACC AAAGAAGACT GATGTTGAAG TGCTAATTAC ACCTCGCCTT
181 CCTCCTACGC TTTATCAATA TTAA
SEQ ID 6
MNYSLQVEHLSIAHMIQGFSEFATTTNEPLDMKQGVGLTLPKKT DVEVLITPRLPPTLYQY

FIG. 4

SEQ ID 7 D58-BE4
1 GCACAACCTT GCTATCAACT TGGTCACATC TATGTTGGGT
61 CATTTGTTCA TCATTTTACA TGGGCTCCG GCCCGGGGGT TAACCCGGAG GATATTGACT
121 TGGAGGAGAG CCCTGGAACA GTAACCTTACA TGA
SEQ ID 8
AQLAINLVTSMLGHLFIILHGLRPRGLTRRILTWRRALEQ

FIG. 5

SEQ ID 9 D56-AH7
1 GAAGGATTG GCTGTTTCGAA TGGTGCCTT GTCATTGGGA
61 TGTATTATTC AATGTTTTGA TTGGCAACGA ATCGGCGAAG AATTGGTTGA TATGACTGAA
121 GGAAGTGGAC TTACTTTGCC TAAAGCTCAA CCTTGGTGG CCAAGTGTAG CCCACGACCT
181 AAAATGGCTA ATCTTCTCTC TCAGATTGA
SEQ ID 10
EGLAVRMVALSLGCI IQCFDQWRIGEE LVDMTEGTGLTLPKAQPLVAKCSPRPKMANLLSQI

FIG. 6

SEQ ID 11 D13a-5
 1 GAAGGATTG GCTATTGCGAA TGGTTGCATT GTCATTGGGA
 61 TGTATTATTC AATGCTTTGA TTGGCAACGA CTTGGGGAAG GATTGGTTGA TAAGACTGAA
 121 GGAAGTGGAC TTAAGCTTCC TAAAGCTCAA CCTTTAGTGG CCAAGTGTAG CCCACGACCT
 181 ATAATGGCTA ATCTTCTTTC TCAGATTGGA
 SEQ ID 12
 EGLAIRMVALSLGCI IQCFDWQRLGEGLVDKTEGTGLTLPKAQPLVAKCSPRIMANLLSQI

FIG. 7

SEQ ID 13 D56-AG10
 1 ATAGGTTTT GCGACTTTAG TGACACATCT GACTTTTGGT
 61 CGCTTGCTTC AAGGTTTTGA TTTTAGTAAG CCATCAAACA CGCCAATTGA CATGACAGAA
 121 GGCCTAGGCG TTAAGTTGCC TAAGGTTAAT CAAGTTGAAG TTCTAATTAC CCCTCGTTTA
 181 CCTTCTAAGC TTTATTTATT TTGA
 SEQ ID 14
 IGFATLVTHLTFGRLLQGFD FSKPSNTPIDMTEGVGVTLPKVNQVEVLITPRLPSKLYLF

FIG. 8

SEQ ID 15 D35-33
 1 ATAGGCTTT GCGACTTTAG TGACACATCT GACTTTTGGT
 61 CGCTTGCTTC AAGGTTTTGA TTTTAGTAAG CCATCAAACA CGCCAATTGA CATGACAGAA
 121 GGCCTAGGCG TTAAGTTGCC TAAGGTTAAT CAAGTTGAAG TTCTAATTAC CCCTCGTTTA
 181 CCTTCTAAGC TTTATTTATT
 SEQ ID 16
 IGFATLVTHLTFGRLLQGFD FSKPSNTPIDMTEGVGVTLPKVNQVEVLITPRLPSKLYL

FIG. 9

SEQ ID 17 D34-62
 1 ATAAATTTT GCGACTTTAG TGACACATCT GACTTTTGGT
 61 CGCTTGCTTC AAGGTTTTGA TTTTAGTACG CCATCAAACA CGCCAATAGA CATGACAGAA
 121 GGCCTAGGCG TTAAGTTGCC TAAGGTAAAT CAAGTGAAG TTCTAATTAG CCCTCGTTTA
 181 CCTTCTAAGC TTTATGTATT CTGA
 SEQ ID 18
 INFATLVTHLTFGRLLQGFD FSTPSNTPIDMTEGVGVTLPKVNQVEVLISPRLPKLYVF

FIG. 10

SEQ ID 19 D56AA7
 1 ATTATACTT GCATTGCCAA TTCTTGGCAT CACTTTGGGA
 61 CGTTTGGTTC AGAAGTTTGA GCTGTTGCCT CCTCCAGGCC AGTCGAAGCT CGACACCACA
 121 GAGAAAGGTG GACAGTTCAG TCTCCACATT TTGAAGCATT CCACCATTGT GTTGAAACCA
 181 AGGTCTTTCT GA
 SEQ ID 20
 IILALPILGITLGRVLQNFELLPPPGQSKLDTTEKGGQFSLHILKHSITIVLKPRSF

FIG. 11

SEQ ID 21 D56-AE1
 1 ATTATACTT GCATTGCCAA TTCTTGGCAT TACTTTGGGA
 61 CGTTTGGTTC AGAACTTTGA GCTGTGCCT CCTCCAGGCC AGTCGAAGCT CGACACCACA
 121 GAGAAAGGTG GACAGTTCAG TCTCCATATT TTGAAGCATT CCACCATTGT GTTGAAACCA
 181 AGGTCTTGCT GA
 SEQ ID 22
 IIALPILGITLGRVLQNFELLPPPGQSKLDTTEKGGQFSLHILKHSTIVLKPRSC

FIG. 12

SEQ ID 23 D35-BB7
 1 TATTGCACCT GGGGTTCAT CAATGGAAC TGCATTGTCA
 61 AATCTTCTTT ATGCATTGTA TTGGGAGTTA CCTTTGGAA TGAAAAAAGA AGACATTGAC
 121 ACAACGCCA GGCCTGGAAT TACCATGCAT AAGAAAAACG AACTTTATCT TATCCCTAAA
 181 AATTATCTAT AG
 SEQ ID 24
 IALGVASMELALSNLLYAFDWELPFGMKKEDIDTNARPGITMHKKNELYLIPKNYLFPSKLYLF

FIG. 13

SEQ ID 25 D177-BA7
 1 ATTGCACCTG GGGTTCATC CATGGAACTT
 121 GCTTTGTCAA ATCTTCTTTA TGCATTGTAT TGGGAGTTAC CTTACGGAGT GAAAAAAGAA
 181 AACATTGACA CAAATGTCAG GCCTGGAATT ACCATGCATA AGAAAAACGA ACTTTGCCTT
 241 ATCCCTAGAA ATTATCTATA G
 SEQ ID 26
 IALGVASMELALSNLLYAFDWELPYGVKKENIDTNVRPGITMHKKNELCLIPRNYL

FIG. 14

SEQ ID 27 D56A-AB6
 1 GGTATTGCAC TTGGGGTTGC ATCCATGGAA CTTGCTTTGT CAAATCTTCT TTATGCATTT
 61 GATTGGGAGT TGCCTTATGG AGTGAAAAA GAAGACATCG ACACAAACGT TAGGCCTGGA
 121 ATTGCCATGC ACAAGAAAAA CGAACTTTC CTTGTCCCAA AAAATTATTT ATAA
 SEQ ID 28
 IALGVASMELALSNLLYAFDWELPYGVKKEDIDTNVRPGIAMHKKNELCLVPKNYL

FIG. 15

SEQ ID 29 D144-AE2
 1 ATT GCACTTGGGG TTGCATCCAT GGAACCTGCT
 61 TTGTCAAATC TTCTTTATGC ATTTGATTGG GAGTTGCCTT ATGGAGTGAA AAAAGAAGAC
 121 ATCGACACAA ACGTTAGGCC TGGAATTGCC ATGCACAAGA AAAACGAACT TTGCCTTGTC
 181 CCAAAAAAAT TATTTATAAA TTATATTGGG ACGTGATCT CATGCTAG
 SEQ ID 30
 IALGVASMELALSNLLYAFDWELPYGVKKEDIDTNVRPGIAMHKKNELCLVPKKLFINYIGTWISC

FIG. 16

SEQ ID 31 D56-AG11
1 ATTTCGTTT GGTTTAGCTA ATGCTTATTT GCCATTGGCT
61 CAATTACTTT ATCACTTTGA TTGGGAACTC CCCACTGGAA TCAAACCAAG CGACTTGGAC
121 TTGACTGAGT TGGTTGGAGT AACTGCCGCT AGAAAAAGTG ACCTTTACTT GGTTCGCGACT
181 CCTTATCAAC CTCCTCAAAA CTGA
SEQ ID 32
ISFGLANAYLPLAQLLYHFDWELPTGIKPSDLDTLTVGVTAARKSDLYLVATPYQPPQN

FIG. 17

SEQ ID 33 D179-AA1
1 ATTTCGTTT GGCTTAGCTA ATGCTTATTT GCCATTGGCT
61 CAATTACTAT ATCACTTCGA TTGGAAACTC CCTGCTGGAA TCGAACCAAG CGACTTGGAC
121 TTGACTGAGT TGGTTGGAGT AACTGCCGCT AGAAAAAGTG ACCTTTACTT GGTTCGCGACT
181 CCTTATCAAC CTCCTCAAAA GTGA
SEQ ID 34
ISFGLANAYLPLAQLLYHFDWKLPAGIEPSDLDTLTVGVTAARKSDLYLVATPYQPPQK

FIG. 18

SEQ ID 35 D56-AC7
1 ATGCTATTT GGTTTAGCTA ATGTTGGACA ACCTTTAGCT
61 CAGTTACTTT ATCACTTCGA TTGGAAACTC CCTAATGGAC AAAGTCATGA GAATTTTCGAC
121 ATGACTGAGT CACCTGGAAT TTCTGCTACA AGAAAGGATG ATCTTGTTTT GATTGCCACT
181 CCTTATGATT CTTATTAATTCAGTCTA TATCATCTAT ATGTACTCAA TAATTGTATG
361 GGA
SEQ ID 36
MLFGLANVGQPLAQLLYHFDWKLPNGQSHENFDMTESPGISATRKDDLVLIIATPYDSY

FIG. 19

SEQ ID 37 D144-AD1
1 ATGC TATTTGGTTT AGCTAATGTT
61 GGACAACCTT TAGCTCAGTT ACTTTATCAC TTCGATTGGA AACTCCCTAA TGGACAAACT
121 CACCAAAATT TCGACATGAC TGAGTCACCT GGAATTTCTG CTACAAGAAA GGATGATCTT
181 ATTTTGATTG CCACTCCTGC TCATTCTTGA
SEQ ID 38
MLFGLANVGQPLAQLLYHFDWKLPNGQTHQNFDMTESPGISATRKDDLIIIIATPAHS

FIG. 20

SEQ ID 39 D144-AB5
1 TTAT TATTCGGTTT AGTTAATGTA
61 GGACATCCTT TAGCTCAATT GCTTTATCAC TTCGATTGGA AGACTCTTCC TGGGATAAGT
121 TCAGATAGTT TCGACATGAC TGAAACAGAT GGAGTAACTG CCGGAAGAAA GGATGATCTT
181 TGTTTAATTG CTAATCCTTT TGGTCTCAAT TAA
SEQ ID 40
LLFGLVNVGHPLAQLLYHFDWKTLPGISSDSFDMTETDGVTAGRKDDLIIIIATPFGLN

FIG. 21

SEQ ID 41 D181-AB5
1 A TGTCGTTTGG TTTAGTTAAC ACTGGGCATC CTTAGCTCA
61 GTTGCTCTAT TTCTTTGACT GGAAATTCCT TCATAAGGTT AATGCAGCTG ATTTTCACAC
121 TACTGAAACA AGTAGAGTTT TTGCAGCAAG CAAAGATGAC CTCTACTTGA TTCCAACAAA
181 TCACATGGAG CAAGAGTAG
SEQ ID 42
MSFGLVNTGHPLAQLLYFFDWKFPKVNAADEFHTTETSRVFAASKDDLYLIPTNHMEQE

FIG. 22

SEQ ID 43 D73-AC9
1 AT GTCGTTTGGT TTAGTTAACA CAGGGCATCC TTTAGCCCAG
121 TTGCTCTATT GCTTTGACTG GAACTCCCT GACAAGGTTA ATGCAAATGA TTTTCGCACT
181 ACTGAAACAA GTAGAGTTT TGCAGCAAGC AAAGATGACC TCTACTTGAT TCCACAAAT
241 CACAGGGAGC AAGAATAG
SEQ ID 44
MSFGLVNTGHPLAQLLYCFDWKLPDKVNANDFRTTETSRVFAASKDDLYLIPTNHREQE

FIG. 23

SEQ ID 45 D56-AC12
1 ATGCAATTT GGTTTGGCTC TTGTTACTCT GCCATTGGCT
61 CATTTGCTTC ACAATTTTGA TTGGAACTT CCCGAAGGAA TTAATGCAAG GGATTGGAC
121 ATGACAGAGG CAAATGGGAT ATCTGCTAGA AGAGAAAAAG ATCTTTACTT GATTGCTACT
181 CCTATGTAT CACCTCTTGA TTAA
SEQ ID 46
MQFGLALVTLPLAHLHNFWDWKLPEGINARDLDMTEANGISARREKDLYLIATPYVSPLD

FIG. 24

SEQ ID 47 D58-AB9
1 ATGACTTAT GCATTGCAAG TGGAACACCT AACAATGGCA
61 CATTTGATCC AGGGTTTCAA TTACAGAACT CCAACTGATG AGCCCTTGGA TATGAAAGAA
121 GGTGCAGGCA TAACTATACG TAAGGTAAAT CCTGTGAAAG TGATAATTAC GCCTCGCTTG
181 GCACCTGAGC TTTATTAA
SEQ ID 48
MTYALQVEHLTMAHLIQGFNYRTPTDEPLDMKEGAGITIRKVNPKVVIITPRLAPELY

FIG. 25

SEQ ID 49 D56-AG9
1 ATGACTTAT GCATTGCAAG TGGAACACCT AACAATGGCA
61 CATTTAATCC AGGGTTTCAA TTACAAAACCT CCAATGACG AGGCCTTGGA TATGAAGGAA
121 GGTGCAGGCA TAACTATACG TAAGGTAAAT CCTGTGGAAC TGATAATAGC GCCTCGCCTG
181 GCACCTGAGC TTTATTAA
SEQ ID 50
MTYALQVEHLTMAHLIQGFNYKTPNDEALDMKEGAGITIRKVNVELIIPRLAPELY

FIG. 26

SEQ ID 51 D56-AG6
1 ATGACTTAT GCATTGCAAG TGGAACACCT AACAAATGGCA
61 CATTTAATCC AGGGTTTCAA TTACAAAACCT CCAAATGACG AGGCCTTGGA TATGAAGGAA
121 GGTGCAGGCA TAACAATACG TAAGGTAAAT CCAGTGGAAT TGATAATAAC GCCTCGCTTG
181 GCACCTGAGC TTTACTAA
SEQ ID 52
MTYALQVEHLTMAHLIQGFNYKTPNDEALDMKEGAGITIRKVPVELIITPRLAPELY

FIG. 27

SEQ ID 53 D35-BG11
1 ATGACTTAT GCATTGCAAG TGGAACACTT AACAAATGGCA
61 CATTTGATCC AAGGTTTCAA TTACAGAACT CCAAATGACG AGCCCTTGGA TATGAAGGAA
121 GGTGCAGGCA TAACTATACG TAAGGTAAAT CCTGTGGAAC TGATAATAGC GCCTCGCCTG
181 GCACCTGAGC TTTATTAA
SEQ ID 54
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVPVELIIPRLAPELY

FIG. 28

SEQ ID 55 D35-42
1 ATGACTTAT GCATTGCAAG TGGAACACTT AACAAATGGCA
61 CATTTGATCC AAGGTTTCAA TTACAGAACT CCAAATGACG AGCCCTTGGA TATGAAGGAA
121 GGTGCAGGCA TAACTATACG TAAGGTAAAT CCTGTGGAAC TGATAATAGC GCCCTGGCA
181 CCTGAGCTTT ATTAA
SEQ ID 56
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVPVELIIPRLAPELY

FIG. 29

SEQ ID 57 D35-BA3
1 ATGACTTAT GCATTGCAAG TGGAACACTT AACAAATGGCA
61 CATTTGATCC AAGGTTTCAA TTACAGAACT CCAAATGACG AGCCCTTGGA TATGAAGGAA
121 GGTGCAGGCA TAACTATACG TAAGGTAAAT CCTGCGGAAC TGATAATAGC GCCTCGCCTG
181 GCACCTGAGC TTTATTAA
SEQ ID 58
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVPVELIIPRLAPELY

FIG. 30

SEQ ID 59 D34-57
1 ATGACTTAT GCATTACAAG TGGAACACCT AACAAATAGCA
61 CATTTGATCC AGGGTTTCAA TTACAAAACCT CCAAATGACG AGCCCTTGGA TATGAAGGAA
121 GGTGCAGGAT TAACCATACG TAAAGTAAAT CCTGTAGAAG TGACAACTAC GGCTCGCCTG
181 GCACCTGAGC TTTATTAA
SEQ ID 60
MTYALQVEHLTIAHLIQGFNYKTPNDEPLDMKEGAGLTIRKVPVEVTTTARLAPELY

FIG. 31

SEQ ID 61 D34-52
 1 ATGACTTAT GCATTACAAG TGGAACACCT AACAAATAGCA
 61 CATTTGATCC AGGGTTTCAA TTACAAAACCT CCAAATGACG AGCCCCTTGA TATGAAGGAA
 121 GGTGCAGGAT TAACTATACG TAAAGTAAAT CCTGTAGAAG TGACAATTAC GGCTCGCCTG
 181 GCACCTGAGC TTTATTAA
 SEQ ID 62
 MTYALQVEHLTIAHLIQGFNYKTPNDEPLDMKEGAGLTIRKVPVEVTITARLAPELY

FIG. 32

SEQ ID 63 D34-25
 1 ATGACTTAT GCATTACAAG TGGAACACCT AACAAATAGCA
 61 CATTTGATCC AGGGTTTCAA TTACAAAACCT CCAAATGACG AGCCCCTTGA TATGAAGGAA
 121 GGTGCAGGAT TAACTATACG TAAAGTAAAT CCTGTAGAAG TGACAATTAC GGCTCGCCTG
 181 GCACCTGAGC TTTATTAA
 SEQ ID 64
 MTYALQVEHLTIAHLIQGFNYKTPNDEPLDMKEGAGLTIRKVPVEVTITARLAPELY

FIG. 33

SEQ ID 65 D56AD10
 1 TATAGCCTT GGAAGCTTAAAG TTATCCGAGT AACATTAGCC
 61 AACATGTTGC ATGGATTCAA CTGGAAATTA CCTGAAGGTA TGAAGCCAGA AGATATAAGT
 121 GTGAAGAAGC ATTATGGGCT CACTACACAT CCTAAGTTTC CTGTTCTGT GATCTTGGAA
 181 TCTAGACTTT CTTAGACTCT CTATCCCCC ATCACTTAA
 SEQ ID 66
 YSLGLKVIIRVTLANMLHGFNWKLPEGMKPEDISVEEHYGLTTHPKFPVPVILESRLLSSDLYSPIT

FIG. 34

SEQ ID 67 D56-AA11
 1 ATACAGTCTT GGGATTCGTA TAATTAGGGC AACTTTAGCT
 61 AACTTGTTC ATGGATTCAA CTGGAGATTG CCTAATGGTA TGAGTCCAGA AGACATTAGC
 121 ATGGAAGAGA TTTATGGGCT AATTACACAC CCCAAAGTCG CACTTGACGT GATGATGGAG
 181 CCTCGACTTC CCAACCATCT TTACAAATAG
 SEQ ID 68
 YSLGIRIIRATLANLLHGFNWRLPNGMSPEDISMEIYGLITHPKVALDVMEPRLPNHLYK

FIG. 35

SEQ ID 69 D177-BD5
 1 ATTAATTTTT CAATACCACT TGTGAGCTT
 121 GCACCTTGCTA ATCTATTGTT TCATTATAAT TGGTCACTTC CTGAAGGGAT GCTAGCTAAG
 181 GATGTTGATA TGAAGAAGC TTTGGGGATT ACCATGCACA AGAAATCTCC CCTTTGCTTA
 241 GTAGCTTCTC ATTATACTTG TTGA
 SEQ ID 70
 INFISIPLVELALANLLFHYNWSLPEGMLAKDVMEEALGITMHKKSPLCLVASHYTC

SEQ ID 71 D56A-AG10
 1 ATGCAACTTG GGCTTTATGC ATTGGAAATG GCTGTGGCCC ATCTTCTTCA TTGTTTACT
 61 TGGGAATTGC CAGATGGTAT GAAACCAAGT GAGCTTAAAA TGGATGATAT TTTTGGACTC
 121 ACTGCTCCAA AAGCTAATCG ACTCGTGGCT GTGCCTACTC CACGTTTGT GTGTCCCCTT
 181 TATTAATTGA

SEQ ID 72
 MQLGLYALEMAVAHLLHCFTWELPDGMKPSELKMDDIFGLTAPKANRLVAVPTPRLLCPLY

FIG. 37

SEQ ID 73 58-BC5
 1 ATGCAACTT GGGCTTTATG CATTAGAAAT GGCAGTGGCC
 61 CATCTTCTTC TTGCTTTAC TTGGGAATTG CCAGATGGTA TGAAACCAAG TGAGCTTAAA
 121 ATGGATGATA TTTTGGACT CACTGCTCCA AGAGCTAATC GACTCGTGGC TGTGCCTAGT
 181 CCACGTTTGT TGTGCCCACT TTATTAA

SEQ ID 74
 MQLGLYALEMAVAHLLLCFTWELPDGMKPSELKMDDIFGLTAPRANRLVAVPSPRLLCPLY

FIG. 38

SEQ ID 75 D58-AD12
 1 ATGCAACTT GGGCTTTATG CATTGGAAAT GGCTGTGGCC
 61 CATCTTCTTC TTGCTTTAC TTGGGAATTG CCAGATGGTA TGAAACCAAG TGAGCTTAAA
 121 ATGGATGATA TTTTGGACT CACTGCTCCA AGAGCTAATC GACTCGTGGC TGTGCCTACT
 181 CCACGTTTGT TGTGTCCCT TTATTAA

SEQ ID 76
 MQLGLYALEMAVAHLLHCFTWELPDGMKPSELKMDDIFGLTAPRANRLVAVPTPRLLCPLY

FIG. 39

SEQ ID 77 D56-AC11
 1 ATGCTTTGG AGTGCGAGTA TAGTGCGCGT CAGCTACCTA
 61 ACTTGTATTT ATAGATTCCA AGTATATGCT GGGTCTGTGT TCAGAGTAGC ATGA

SEQ ID 78
 MLWSASIVRVSYLTCIYRFQVYAGSVFRVA

FIG. 40

SEQ ID 79 D35-39
 1 ATGCTTTGG AGTGCGAGTA TAGTGCGCGT CAGCTACCTA
 61 ACTTGTATTT ATAGATTCCA AGTATATGCT GGGTCTGTGT TCAGAGTAGC ATGA

SEQ ID 80
 MLWSASIVRVSYLTCIYRFQVYAGSVFRVA

FIG. 41

SEQ ID 81

D58-BH4

1 ATGCTTTGG AGTGCGAGTA TAGTGCGCGT CAGCTACCTA
61 ACCTGTATTT ATAGATTCCA AGTATATGCT GGGTCTGTGT TCAGAGTAGC ATGA

SEQ ID 82

MLWSASIVRVSYLTCIYRFQVYAGSVFRVA

FIG. 42

SEQ ID 83

D177-BD7

1 ATTAATTTTT CAATACCACT TGTGAGCTT GCACTTGCTA ATCTATTGTT TCATTATAAT
61 TGGTCACTTC CTGAGGGGAT GCTACCTAAG GATGTTGATA TGGAGAAGC TTGGGGGATT
121 ACCATGCACA AGAAATCTCC CCTTTGCTTA GTAGCTTCTC ATTATAACTT GTTGTGA

SEQ ID 84

INFSIPLVELALANLLFHYNWSLPEGMLPKDVDMEELGITMHKKSPLCLVASHYNLL

FIG. 43

SEQ ID 85

D176-BF2

1 AT ATCATTTGGT TTGGCTAATG TTTATTTGCC ACTAGCTCAA
121 TTGTTATATC ATTTTGATTG GAACTCCCT ACTGGAATCA ATCAAGTGA CTTGGACATG
181 ACTGAGTCGT CAGGAGTAAC TTGTGCTAGA AAGAGTGATT TATACTTGAC TGCTACTCCA
241 TATCAACTTT CTCAAGAGTG A

SEQ ID 86

GISFGLANVYLPALQLLYHFDWKLPTGINSSDLDMTESSGVTCAKSDLYLTATPYQLSQE

FIG. 44

SEQ ID 87

D56-AD6

1 ATGCTTTGG AGTGCGAGTA TAGTGCGCGT CAGCTACCTA
61 ACTTGATATT ATAGATTCCA AGTATATGCT GGGTCTGTGT CCAGAGTAGC ATGA

SEQ ID 88

MLWSASIVRVSYLTCIYRFQVYAGSVSRVA

FIG. 45

SEQ ID 89

D73A-AD6

1 CT GAATTTTGCA ATGTTAGAGG CAAAAATGGC ACTTGCATTG
121 ATTCTACAAC ACTATGCTTT TGAGCTCTCT CCATCTTATG CACATGCTCC TCATACAATT
181 ATCACTCTGC AACCTCAACA TGGTGCTCCT TTGATTTTGC GCAAGCTGTA G

SEQ ID 90

INFAMLEAKMALALILQHYAFELSPSYAHAPHTIITLQPQHGAFLILRKL

FIG. 46

SEQ ID 91 D70A-BA11
 1 CT GAATTTTGCA ATGTTAGAGG CAAAAATGGC ACTTGCAATTG
 121 ATTCTACAAC ACTATGCTTT TGAGCTCTCT CCATCTTATG CACACGCTCC TCATACAATT
 181 ATCACTCTGC AACCTCAACA TGGTGCTCCT TTGATTTTGC GCAAGCTGTA G
 SEQ ID 92
 LNFAMLEAKMALILQHYAFELSPSYAHAPHTIITLQPQHGAPLILRL

FIG. 47

SEQ ID 93 D70A-BB5
 1 AA TAATTTTGCA ATGTTGGAAA CTAAGATTGC CTTAGCAATG
 121 ATCCTACAGC GTTTGTCTTT CGAGCTTCT CCATCTTACG CTCATGCACC TACTTATGTC
 181 GTCACCTTTC GACCTCAGTG TGGTGCTCAC TTAATCTTGC AAAAATTATA GGTCCTTAAT
 241 CTGGATTTC CATTATTGAG TAGTGCTAA TAAATCTTCT CTATCACTAT TTTCCATCT
 301 TTCA
 SEQ ID 94
 NNFAMLETKIALAMILQRFAFELSPSYAHAPTYVVTLRPQCGAHLILQKL

FIG. 48

SEQ ID 95 D70A-AB5
 1 AGCGAAGGGG TGGCAAAGGC AACAAAGGGG AAAATGACAT ATTTTCCATT TGGTGCAGGA
 61 CCGCGAAAAAT GCATTGGGCA AAACCTCGCG ATTTTGGAAG CAAAAATGGC TATAGCTATG
 121 ATTCTACAAC GCTTCTCCTT CGAGCTCTCC CCATCTTATA CACACTCTCC ATACACTGTG
 181 GTCACCTTGA AACCCAAATA TGGTGCTCCC CTAATAATGC ACAGGCTGTA GTCCTGTGAG
 241 AATATGCTAT CCGAGGAATT CAGTTCCT
 SEQ ID 96
 QNFAILEAKMAIAMILQRFSFELSPSYTHSPYTVVTLKPKYGAPLIMHRL

FIG. 49

SEQ ID 97 D70A-AA8
 1 AGCGAAGGGG TGGCAAAGGC AACAAAGGGG AAAATGACAT ATTTTCCATT TGGTGCAGGA
 61 CCGCGAAAAAT GCATTGGGCA AAACCTCGCG ATTTTGGAAG CAAAAATGGC TATAGCTATG
 121 ATTCTACAAC GCTTCTCCTT CGAGCTCTCT CCATCTTATA CACACTCTCC ATACACTGTG
 181 GTCACCTTGA AACCCAAATA TGGTGCTCCC CTAATAATGC ACAGGCTGTA GTCCTGT
 SEQ ID 98
 QNFAILEAKMAIAMILQRFSFELSPSYTHSPYTVVTLKPKYGAPLIMHRL

FIG. 50

SEQ ID 99 D70A-AB8
 1 C AAAATTTTGC CATGTTAGAA GCAAAGATGG CTCTGTCTAT GATCCTGCAA
 121 CGTTCTCTT TTGAACGTC TCCGTCTTAT GCACATGCCC CTCAGTCCAT ATTAACCGT
 181 CAGCCACAAT ATGGTGCTCC ACTTATTTT CACAAGCTAT AA
 SEQ ID 100
 QNFAMLEAKMALSMILQRFSFELSPSYAHAPQSILTVPQYGAPLIFHKL

FIG. 51

SEQ ID 101 D70A-BH2
1 AT AACTTTTGCA ATGACAGAAG CGAAGATGGC TATGGCTATG
121 ATTCTGCAAC GCTTCTCCTT TGAGCTATCT CCATCTTACA CACATGCTCC ACAGTCTGTA
181 ATAACATATGC AACCCCAATA TGGTGCTCCT CTTATATTGC ACAAATTGTA A
SEQ ID 102
INFAMTEAKMAMAMILQRFSEFELSPSYTHAPQSVITMQPQYGAPLILHKL

FIG. 52

SEQ ID 103 D70A-AA4
1 AT AACTTTTGCA ATGGCAGAAG CGAAGATGGC TATGGCTATG
121 ATTCTGCAAC GCTTCTCCTT TGAGCTATCT CCATCTTACA CACATGCTCC ACAGTCTGTA
181 ATAACATATGC AACCCCAATA TGGTGCTCCT CTTATATTGC ACAAATTGTA A
SEQ ID 104
INFAMAEAKMAMAMILQRFSEFELSPSYTHAPQSVITMQPQYGAPLILHKL

FIG. 53

SEQ ID 105 D70A-BA1
1 CA AACTTTTGCA ATGATGGAAG CAAAAATGGC AGTAGCTATG
121 ATACTACAAA AATTTTCCTT TGAACATCC CCTTCTTATA CACATGCTCC ATTTGCAATT
181 GTGACTATTC ATCCTCAGTA TGGTGCTCCT CTGCTTATGC GCAGACTTTA A
SEQ ID 106
QNFAMMEAKMAVAMILQKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

FIG. 54

SEQ ID 107 D70A-BA9
1 CA AACTTTTGCA ATGATGGAAG CAAAAATGGC AGTAGCTATG
121 ATACTACATA AATTTTCCTT TGAACATCC CCTTCTTATA CACATGCTCC ATTTGCAATT
181 GTGACTATTC ATCCTCAGTA TGGTGCTCCT CTGCTTATGC GCAGACTTTA A
SEQ ID 108
QNFAMMEAKMAVAMILHKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

FIG. 55

SEQ ID 109 D70A-BD4
1 CA AAATTTTGCT ATGTTAGAGG CTAAATGGC AATGGCTATG
121 ATTCTGAAAA CCTATGCATT TGAACCTCTCT CCATCTTATG CTCATGCTCC TCATCCACTA
181 CTACTTCAAC CTCATATGG TGCTCAATTA ATTTGTGACA AGTTGTAG
SEQ ID 110
QNFAMLEAKMAMAMILKTYAFELSPSYAHAPHPLLLQPQYGAQLILYKL

SEQ ID 111 D181-AC5
 1 TATAGCATGG GGCTCAAGGC GATTCAAGCT AGCTTAGCTA
 61 ATCTTCTACA TGGATTTAAC TGGTCATTGC CTGATAATAT GACTCCTGAG GACCTCAACA
 121 TGGATGAGAT TTTTGGGCTC TCTACACCTA AAAAATTCC ACTTGCTACT GTGATTGAGC
 181 CAAGACTTTC ACCAAAATT TACTCTGTTT GA
 SEQ ID 112
 YSMGLKAIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

FIG. 57

SEQ ID 113 D144-AH1
 1 TAT AGCTTGGGGC TCAAGGAGAT TCAAGCTAGC
 61 TTAGCTAATC TTCTACATGG ATTTAACTGG TCATTGCCTG ATAATATGAC TCCTGAGGAC
 121 CTCAACATGG ATGAGATTTT TGGGCTCTCT ACACCTAAAA AATTTCCTACT TGCTACTGTG
 181 ATTGAGCCAA GACTTTCACC AAACTTTAC TCTGTTTGA
 SEQ ID 114
 YSLGLKEIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

FIG. 58

SEQ ID 115 D34-65
 1 CATAGCTTG GGGCTCAAGG TGATTCAAGC TAGCTTAGCT
 61 AATCTTCTAC ATGGATTTAA CTGGTCATTG CCTGATAATA TGACTCCTGA GGACCTCAAC
 121 ATGGATGAGA TTTTGGGCT CTCTACACCT AAAAATTTC CACTTGCTAC TGTGATTGAG
 181 CCAAGACTTT CACCAAACT TTAATCTGTT TGA
 SEQ ID 116
 HSLGLKVIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

FIG. 59

SEQ ID 117 D35-BG2
 1 CTGTGCTTT CCATGTTTAA TCTCTAGTTA TATACTGGCT
 61 TTGAATGTGA ATCTGTATCA TAATTCTTG CAAATTCTC CTTCATTTC TTATTAA
 SEQ ID 118
 LCFPCLISSYILALNVNLYHNFLQISPSISY

FIG. 60

SEQ ID 119 D73A-AH7
 1 TCTG GACTTGCTCA ATGTGTGTT GGTTAGCTT TAGCAACTCT AGTGCAGTGT
 121 TTTGAGTGGA AAAGGGTAAG CGAAGAGGTG GTTGATTGA CGGAAGGAAA AGGTCTCACT
 181 ATGCCAAAAC CCGAGCCACT CATGGCTAGG TGCGAAGCTC GTGACATTTT TCACAAAGTT
 241 CTTTCAGAAA TATCTTAA
 SEQ ID 120
 SGLAQCVVGLALATLVQCFEWKRVSEEVVDLTEGKGLTMPKPEPLMARCEARDIFHKVLSEIS

FIG. 61

SEQ ID 121 D58-AA1
 1 TTGGGCTTG GCAACGGTGC ATGTGAATTT GATGTTGGCC
 61 CGAATGATTC AAGAATTTGA ATGGTCCGCT TACCCGAAA ATAGGAAAGT GGATTTTACT
 121 GAGAAATTGG AATTTACTGT GGTGATGAAA AATCCTTTAA GAGCTAAGGT CAAGCCAAGA
 181 ATGCAAGTGG TGTAA
 SEQ ID 122
 LGLATVHVNLMLARMIQEFESYAPENRKVDFTEKLEFTVVMKNPLRAKVKPRMQV

FIG. 62

SEQ ID 123 D73A-AE10
 1 TATGCTT TGGCTATGCT TCATTTAGAG
 121 TACTTTGTGG CTAATTTGGT TTGGCATTTT CGATGGGAGG CTGTGGAGGG AGATGATGTT
 181 GATCTTTCAG AAAAGCTAGA ATTCACCGTT GTGATGAAGA ATCCACTTCG AGCTCGTATC
 241 TGCCCCAGAG TTAATCTAT TTGA
 SEQ ID 124
 YALAMHLLEYFVANLVWHRWEAVEGDDVDLSEKLEFTVVMKNPLRARICPRVNSI

FIG. 63

SEQ ID 125 D56A-AC12
 1 GGTCAAGCAAG TTGGACTTCT TAGAACAACC ATTTTCATCG CCTCATTACT GTCTGAATAT
 61 AAGCTGAAAC CTCGCTCACA CCAGAAACAA GTTGAACCTCA CCGATTAAA TCCAGCAAGT
 121 TGGCTTCATT CGATAAAAGG CGAACTGTTA GTCGATGCGA TTCTCGAAA GAAGGCGGCA
 181 TTTTAA
 SEQ ID 126
 GQQVGLLRTTIFIASLLSEYKLPKPRSHQKQVELDNLNPASWLHSIKGELLVDAIPRKAAF

FIG. 64

SEQ ID 127 D177-BF7
 1 ATCACATTG CTAAGTTTGT GAATGAGCTA
 121 GCATTGGCAA GATTAATGTT CCATTTTGAT TTCTCGCTAC CAAAAGGAGT TAAGCATGAG
 181 GATTTGGACG TGGAGGAAGC TGCTGGAATT ACTGTTAGAA GGAAGTTCCC CCTTTAGCC
 241 GTCGCCACTC CATGCTCGTG A
 SEQ ID 128
 ITFAKEFVNELALARLHFHDFSLPKGVKHEDLDVEEAAGITVRRKFPLAVATPCS

FIG. 65

SEQ ID 129 D73A-AG3
 1 CA GAGGTATGCT ATAAACCATT TGATGCTCTT TATTGCGTTG
 121 TTCACGGCTC TGATTGATTT CAAGAGGCAC AAAACGGACG GCTGTGATGA TATCGCGTAT
 181 ATTTCAACCA TTGCTCCAAA GGATGATTGT AAAGTGTTCC TTTCACAGAG GTGCACTCGA
 241 TTCCCATCTT TTTTATGA
 SEQ ID 130
 QRYAINHMLFIALIFTALIDFKRHKTDCDDIAYIPTIAPKDDCKVFLSQRCTRFPSFS

FIG. 66

SEQ ID 131 D70A-AA12
 1 ATG TCATTTGGTT TAGCTAATCT TTAATTACCA TTGGCTCAAT
 121 TACTCTATCA CTTTGACTGG AACTCCCAA CCGGAATCAA GCCAAGAGAC TTGGACTTGA
 181 CCGAATTATC GGAATAACT ATTGCTAGAA AGGGTGACCT TACTTAAAT GCTACTCCTT
 241 ATCAACCTTC TCGAGAGTAA
 SEQ ID 132
 MSFGLANLYLPLAQLLYHFDWKLPRTGKIPRDLDTLSGITIARKGDLYLNATPYQPSRE

FIG. 67

SEQ ID 133 D185-BC1
 1 TTGGGCTTG GCAACGGTGC ATGTGAATTT GATGTTGGCC
 61 CGAACGATTC AAGAATTTGA ATGGTCCGCT TACCCGAAA ATAGGAAAGT GGATTTTACT
 121 GAGAAATTGG AATTACTGT GGTGATGAAA AACCCTTAA GAGCTAAGGT CAAGCCAAGA
 181 ATGCAAGTGG TGTAA
 SEQ ID 134
 LGLATVHVNLMRLARTIQEFWSAYPENRKVDFTEKLEFTVVMKNPLRAKVKPRMQVV

FIG. 68

SEQ ID 135 D185-BG2
 1 TTGGGCTTG GCAACGGTGC ATGTGAATTT GATGTTGGCC
 61 CGAATGATTC AAGAATTTGA ATGGTCCGCT TACCCGAAA ATAGGAAAGT GGATTACTG
 121 AGAAATTGGA ATTTACTGTG GTGA
 SEQ ID 136
 LGLATVHVNLMRLARMIQEFWSAYPENRKVDLLRNWNLLW

FIG. 69

SEQ ID 137 D185-BE1
 1 ATCACATTT GCTAAGTTTG TGAATGAGCT AGCATTGGCA
 61 AGATTAATGT TCCATTTTGA TTTCTCGCTA CCAAAGGAG TTAAGCATGA GGATTGGAC
 121 GTGGAGGAAG CTGCTGGAAT TACTGTTAGG AGGAAGTCC CCCTTTAGC CGTCGCCACT
 181 CCATGCTCGT GA
 SEQ ID 138
 ITFAKFVNELALARLMFHDFSLPKGVKHEDLDVEEAAGITVRRKFPLAVATPCS

FIG. 70

SEQ ID 139 D185-BD2
 1 ATCACATTT GCTAAGTTTG TGAATGAGCT AGCATTGGCA
 61 AGATTAATGT TCCATTTTGA TTTCTCGCTA CCAAAGGAG TTAAGCATGC GGATTGGAC
 121 GTGGAGGAAG CTGCTGGAAT TACTGTTAGA AGGAAGTCC CCCTTTAGC CGTCGCCACT
 181 CCATGCTCGT GA
 SEQ ID 140
 ITFAKFVNELALARLMFHDFSLPKGVKHADLDVEEAAGITVRRKFPLAVATPCS

FIG. 71

SEQ ID 141 D176-BG2
1 CA AAATTTTGCC ATGTTAGAAG CAAAGACTAC TTTGGCTATG
121 ATCCTACAAC GCTTCTCCTT TGAAGTGTCT CCATCTTATG CACATGCTCC TCAGTCCATA
181 ATAACTTTGC AACCCAGTA TGGTGCTCCA CTTATTTTGC ATAAATATA
SEQ ID 142
QNFAMLEAKTTLAMILQRFSFELSPSYAHAPQSIITLQPQYGAPLILHKI

FIG. 72

SEQ ID 143 D185-BD3
1 ATTATCCTT GCACTGCCAA TTCTTGGCAT TACCTTGGGA
61 CGCTTGGTGC AGAAGTTTGA GTTGTGCTT CCTCCAGGAC AGTCAAAGCT TGACACAACA
121 GAGAAAGCGG GGCAATTCAG TCTGCACATT TTGAAGCATT CCACCATGT GATGAAACCA
181 AGATCTTTT AA
SEQ ID 144
IILALPILGITLGRVLQNFELLPPPGQSKLDTTEKGGQFSLHILKHSTIVMKPRSF

FIG. 73

SEQ ID 145 D176-BC3
1 C AAAATTTTGC CATGTTAGAA GCAAAGACTA CTTTGGCTAT
121 GATCCTACAA CGCTTCTCCT TTGAAGTGT TCCATCTTAT GCACATGCTC CTCAGTCCAT
181 AATAACTTGC AACCCAGTA TGGTGCTCCA CTTATTTTGC ATAAATATA GTTTATTACT
241 TGTAAGTAGT GTCTCGTTTT ATGTTAAGCA TGAGTCCAAA ATGTTAAGGC TTGTAGAACT
301 GCAAATGGG AATGCATTG CACTCGTGCA CTGTAGATTG TTGTAA
SEQ ID 146
QNFAMLEAKTTLAMILQRFSFELSPSYAHAPQSIITCNPSMVLHLFCIKYSLLLVSSVSFYVKHESKMLRLVELQNGNA
FALVHCRL

FIG. 74

SEQ ID 147 D176-BB3
1 GCTGAT
61 ATGGGGTTGC GAGCAGTTTC TTTGGCATT GGTGCACTTA TTCAATGCTT TGACTGGCAA
121 ATTGAGGAAG CGGAAAGCTT GGAGGAAAGC TATAATTCTA GAATGACTAT GCAGAACAAG
181 CCTTTGAAGG TTGTCTGCAC TCCACGCGAA GATCTTGCC AGCTTCTATC CCAACTCTAA
SEQ ID 148
ADMGLRAVSLALGALIQCFDWQIEEAESLEESYNSRMTMKNKPLKVVCTPREDLGQLLSQL

FIG. 75

NAME D89-AB1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 149

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1 CTTCCTTCCT AAGTCCTAAC TAAAAATGGA GATTCAGTTT TCTAACTTAG TTGCATTCTT
61 GCTCTTTCTC TCAGCATCTT TTCTTCTATT CAAAAAATGG AAAACCAGAA AACTAAATTT
121 GCCTCCTGGT CCATGGAAAT TACCTTTTAT TGGAAATTTA CACCATTGGG CTGTGGCAGG
181 TCCACTTCCT CACCATGGCC TAAAAAATTT AGCCAAACGC TATGGTCCCTC TTATGCATTT
241 ACAACTTGGA CAAATTCCTA CACTCATCAT ATCATCACCT CAAATGGCAA AAGAAGTACT
301 AAAAATCAGC GACCTCGCTT TTGCCACTAG ACCAAAGCTT GTCGCGGCGG ACATCATTCA
361 CTACGACAGC ACGGACATAG CATTTTCTCC GTACGGTGAA TACTGGAGAC AAATTCGTAA
421 AATTTCGATA TTGGAACCTC TGAGTGCCAA GATGGTCAAA TTTTITAGCT CGATTGCCCA
481 AGATGAGCTC TCGAAGATGC TCTCATCTAT ACGAACGACA CCCAATCTTA CAGTCAATCT
541 TACTGACAAA ATTTTTTGGT TTACGAGTTC GGTAACCTGT AGATCAGCTT TAGGGAAGAT
601 ATGTGGTGAC CAAGACAAAT TGATCATTTT TATGAGGGAA ATAATATCAT TGGCAGGTGG
661 ATTTAGTATT GCTGATTTT TCCCTACATG GAAATGATT CATGATATTG ATGGTTCCGAA
721 ATCTAAACTG GTGAAAGCAC ATCGTAAGAT TGATGAAATT TTGGGAAATG TTGTTGATGA
781 GCACAAAAG AACAGAGCAG ATGGCAAGAA GGGTAATGGT CAAATTCCTA TCACAATGA
841 GATTGATGTA TTGTTAAGAG TTAGAGAAAG TGGAGAAGTT CAAATTCCTA TCACAATGA
901 CAATATCAAA TCAATATTAA TCGACATGTT CTCTGCAGGA TCTGAAACAT CATCGACGAC
961 TATAATTTGG GCATTAGCTG AAATGATGAA GAAACCAAGT GTTTTAGCAA AGGCACAAGC
1021 TGAAGTAAGG CAAGCTTTGA AGGAGAAAAA AGGTTTTCAA CAGATTGATC TTGATGAGCT
1081 AAAATATCTC AAGTTAGTAA TCAAAGAAAC CTTAAGAATG CACCCTCCAA TTCCTCTATT
1141 AGTTCCTAGA GAATGTATGG AGGATACAAA GATTGATGGT TACAATATAC CTTTCAAAAC
1201 AAGAGTCATA GTTAATGCAT GGGCAATCGG ACGAGATCCA GAAAGTTGGG ATGACCCCGA
1261 AAGCTTTATG CCAGAGAGAT TTGAGAATAG TTCTATTGAC TTTCTTGGAA ATCATCATCA
1321 GTTTATACCA TTTGGTGCGA GAAGAAGGAT TTGTCCGGGA ATGCTATTTG GTTTAGCTAA
1381 TGTTGGACAA CCTTTAGCTC AGTTACTTTA TCACTTCGAT TGGAAACTCC CTAATGGACA
1441 AAGTCATGAG AATTTTCGAC TGACTGAGTC ACCTGGAATT TCTGCTACAA GAAAGGATGA
1501 TCTTGTTTTG ATTGCCACTC CTTATGATTC TTATTAAGCA GTAGCAGAAA TAAAAAGCCG
1561 GGGCAACACG AAAAAA

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SEQ. ID. NO. 150

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1 MEIQFSNLVA FLLFLSSIFL LFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKRYGPLM HLQLGQIPTL IISSPQMAKE VLKTHDLAFA TRPKLVAADI IHYDSTDIAF
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMLS SIRTTPNLTIV NLTDKIFWFT
181 SSVTCRSALG KICGDQDKLI IFMREIISLA GGFESIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILGNVV DEHKKNRADG KKGNGEFGGE DLIDVLLRVR ESSEVQIPIT NDNKISILID
301 MFSAGSETSS TTIIWALAEM MKKP SVLAKA QAEVRQALKE KKG FQQIDLD ELKYLKLVK
361 ETLRMHPIPI LLVPRECMED TKIDGYNIPF KTRVIVNAWA IGRDPESWDD PESFMPERFE
421 NSSIDFLGNH HQFIFPGAGR RICPGMLFGL ANVGQPLAQL LYHFDWKLPN GQSHENFDMT
481 ESPGISATRK DDLVLIATPY DSY

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FIG. 76

NAME D89-AD2
ORGANISM NICOTIANA TABACUM

SEQ. ID. NO. 151

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1 TCCTTCTTCC TTCTTAAGTC CTAATAAAAA ATGGAGATTC AGTTTTCTAA CTTAGTTGCA
61 TTCTTGCTCT TTCTCTCCAG CATCTTTCTT CTATTCAAAA AATGGAAAAA CAGAAAACTA
121 AATTTGCCTC CTGGTCCATG GAAATTACCT TTTATTGGAA GTTTACACCA TTTGGCTGTG
181 GCAGGTCCAC TTCTCACCA TGGCCTAAAA AATTAGCCA AACGCTATGG TCCTCTTATG
241 CATTTACAAC TTGGACAAAT TCCTACACTC ATCATATCAT CACCTCAAAT GGCAAAAGAA
301 GTACTAAAAA CTCACGACCT CGCTTTTGCC ACTAGACCAA AGCTTGTCGT GGCCGACATC
361 ATTCACTACG ACAGCACGGA CATAGCATTT TCTCCGTACG GTGAATACTG GAGACAAATT
421 CGTAAAAATT GCATATTGGA ACTCTTGAGT GCCAAGATGG TCAAATTTTT TAGTCGATT
481 CGCCAAGATG AGCTCTCGAA GATGCTCTCA TCTATACGAA CGACACCCAA TCTTACAGTC
541 AATCTTACTG ACAAAAATTT TTGGTTTACG AGTTCGGTAA CTGTAGATC AGCTTTAGGG
601 AAGATATGTG GTGACCAAGA CAAATTGATC ATTTTATGA GGGAAATAAT ATCATTGGCA
661 GGTGGATTTA GTATTGCTGA TTTTTCCTT ACATGGAAAA TGATTATGA TATTGATGGT
721 TCGAAATCTA AACTGGTGAA AGCAGATCGT AAGATTGATG AAATTTTGGG AAATGTTGTT
781 GATGAGCACA AAAAGAACAG AGCAGATGGC AAGAAGGGTA ATGGTGAATT TGGTGGTGAA
841 GATTGATTG ATGTATTGTT AAGAGTTAGA GAAAGTGGAG AAGTTCAAAT TCCTATCACA
901 AATGACAATA TCAAATCAAT ATTAATCGAC ATGTTCTCTG CGGGATCTGA AACATCATCG
961 AGCACTATAA TTTGGGCATT AGCTGAAATG ATGAAGAAAC CAAGTGTGTT AGCAAAGGCA
1021 CAAGCTGAAG TAAGGCAAGC TTTGAAGGAG AAAAAAGGTT TTCAACAGAT TGATCTTGAT
1081 GAGCTAAAAA ATCTCAAGTT AGTAATCAAA GAAACCTTAA GAATGCACCC TCCAATTCCT
1141 CTATTAGTTC CTAGAGAATG TATGGAGGAT ACAAAGATTG ATGGTTACAA TATACCTTTC
1201 AAAACAAGAG TCATAGTTAA TGCATGGGCA ATCGGACGAG ATCCAGAAAG TTGGGATGAC
1261 CCCGAAAGCT TTATGCCAGA GAGATTGAG AATAGTTCTA TTGACTTTCT TGGAAATCAT
1321 CATCAGTTTA TACCATTGG TGCAGGAAGA AGGATTTGTC CGGGAATGCT ATTTGGTTTA
1381 GCTAATGTTG GACAACTTT AGCTCAGTTA CTTTATCACT TCGATTGGAA ACTCCCTAAT
1441 GGACAAAGTC ATGAGAAATT CGACATGACT GAGTCACCTG GAATTTCTGC TACAAGAAAG
1501 GATGATCTTG TTTTGATTGC CACTCCTTAT GATTCTTATT AAGCAGTAGC AGAAATAAAA
1561 AGCCGGGGCA AACAGAAAAA A

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SEQ. ID. NO. 152

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1 MEIQFSNLVA FLLFLSSIFL LFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NIAKRYGPLM HLQLGQIPTL IISSPQMAKE VLKTHDLAFA TRPKLVVADI IHYDSTDIAF
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMLS SIRTTPNLTV NLTDKIFWFT
181 SSVTCRSALG KICGDQDKLI IFMREIISLA GGFSIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILGNV DEHKKNRADG KKGNGEFGGE DLIDVLLVR ESGEVQIPIT NDNIKSILID
301 MFSAGSETSS TTIWALAEM MKKPSVLAKA QAEVRQALKE KKGQQIDLD ELKYLKLVK
361 ETLRMHPPIP LLVPRECMED TKIDGYNIPF KTRVIVNAWA IGRDPESWDD PESFMPERFE
421 NSSIDFLGNH HQFIFPGAGR RICPGMLFGL ANVGQPLAQL LYHFDWKLPN GQSHENFDMT
481 ESPGISATRK DDLVLIATPY DSY

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FIG. 77

NAME D90A-BB3
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 153

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1  CAACTGCAGT TTGAAGATAC CAACTAACCA AAATGCAGTT CTTGAGCTTG GTTTCATT
61 TCCTATTTCT ATCTTTTCTC TTTTGTAA GGAAATGGAA GAACTCGAAT AGCCAAAGGA
121 AAAAAATTGCC ACCAGGTCCA TGGAACTAC CAATACTAGG AAGTATGCTT CATATGGTTG
181 GTGGACTACC ACACCATGTC CTTAGAGATT TAGCCAAAAA ATATGGACCG CTTATGCACC
241 TTCAATTAGG TGAAGTTTCT GCAGTTGTGG TTACTTCTCC TGATATGGCA AAAGAAGTAC
301 TAAAAACTCA TGACATCGCT TTCGCGTCTA GGCCTAGCCT TTTGGCCCCG GAGATTGTCT
361 GTTACAATAG GTCTGATCTT GCGTTTGGCC CCTATGGCGA TTATTGGAGA CAAATGCGTA
421 AAATATGTGT CTTGGAAGTG CTCAGTGCCA AGAATGTTCC GACATATAGC TCTATTAGGC
481 GCGATGAAGT TCTTCGTCTC CTTAATTTTA TCCGGTCATC TTCTGGTGAG CCTGTTAATA
541 TTACGGAAAG GATCTTTTGG TTCACAAGCT CCATGACATG TAGATCAGCG TTTGGGCAAG
601 TATTCAAGGA GCAAGACAAA TTTATACAAC TAATTAAAGA AGTTATACTC TTAGCAGGAG
661 GGTGTGATGT GGTGACATA TTCCCTTCAT ACAAGTCTCT TCATGTGCTC AGTGAATGA
721 AGGGTAAGAT TATGAATGCA CACCATAAGG TAGATGCTAT TGTTGAGAAT GTCATCAACG
781 AGCACAAGAA AAATCTTGCA ATTGGGAAAA CTAATGGAGC GTTAGGAGGT GAAGATTAA
841 TTGATGTTCT TCTAAACTT ATGAATGATG GAGGCCTTCA ATTTCCTATC ACCAACGACA
901 ACATCAAGC TATAATCTTT GACATGTTTG CTGCTGGAAC AGAGACTTCA TCGTCAACAA
961 TTGTGTGGGC PATGGTGGA ATGGTGAAAA ATCCAAGTGT ATTTGCGAAA GCTCAAGCAG
1021 AAGTAAGAGA TGCATTTAGA GAAAAAGAAA CTTTGTATGA AAATGATGTG GAGGAGCTAA
1081 ACTATCTAAA GTTAGTCATT AAAGAACTC TAAGACTTCA TCCACCGGTT CCACCTTTGC
1141 TCCCAAGAGA ATGTAGGGAA GAGACAAATA TAAACGGCTA CACTATTCCCT GTAAAGACCA
1201 AAGTCATGGT TAATGTTTGG GCATTGGGAA GAGATCCAAA ATATTGGGAT GATGCAGAAA
1261 CTTTTAAGCC AGAGAGATTT GAGCAGTGCT CTAAGGATTT TGTTGGTAAT AATTTTGAAT
1321 ATCTTCCATT TGGTGGTGGA AGGAGGATTT GTCCAGGGAT TTCGTTTGGT TTAGCTAATG
1381 CTTATTTGCC ATTGGCTCAA TTAATTTATC ACTTTGATTG GGAACCTCCC ACTGGAATCA
1441 AACCAAGCGA CTTGGACTTG ACTGAGTTGG TTGGAGTAAC TGCCGCTAGA AAAAGTGACC
1501 TTTACTTGTT TGCAGACTCT TATCAACCTC CTCAAAAAC

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SEQ. ID. NO. 154

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1  MQFFSLVSIF LFLSFLFLLR KWKNSNSQRK KLPPGPWKLP ILGSMMLHVMG GLPHHVLRDL
61 AKKYGPLMHL QLGEVSAVVV TSPDMAKEVL KTHDIAFASR PSLLAPEIVC YNRSDIAFCP
121 YGDYWRQMRK ICVLEVLAK NVRTYSSIRR DEVLRLNFI RSSSGEPVNI TERIFLTSS
181 MTCRSAFQGV FKEQDKFIQL IKEVILLAGG FDVADIFPSY KSLHVLSGMK GKIMNAHHKV
241 DAIVENVINE HKKNLAIGKT NGALGGEDLI DVLLKLMNDG GLQFPITNDN IKAIIFDMFA
301 AGTETSSSTI VWAMVEMVKV PTVFAKAQAE VRDAFREKET FDENDVEELN YLKLVIKETL
361 RLHPPVPLLL PRECREETNI NGYTIPVKTK VMVNVWALGR DPKYWDDAET FKPERFEQCS
421 KDFVGNFHEY LPFGGRRIC PGISFGLANA YLPLAQLLYH FDWELPTGIK PSDLDLTEL
481 GVTAARKSDL YLVATPYQPP QN

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FIG. 78

NAME D95-AG1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 155

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1 AAAAGATGTC TTCATTTTCC ACATCTTCTG CCACTTCTAA TTCCAAACTT CCAGTTCGAG
61 AAATCCCAGG AGACTATGGT TTCCCCTTTT TTGGAGCCAT AAAAGATAGA TATGACTACT
121 TCTACAACTT CCGGCACAGAC GAATTCCTTTT TTACCAAAAT GCAAAAATAC AACTCTACTG
181 TCTTTAGAAC CAACATGCCA CCAGGTCCAT TCATTGCTAA AAATCCCAA GTAATTGTTT
241 TCCTCGATGC CAAAACATTT CCCGTTCTTT TCGACAACCT TAAAGTCGAA AAAATGAACG
301 TTCTTGATGG CACGTACGTG CCATCTACTG ATTTCTATGG CGGATATCGC CCGTGTGCTT
361 ATCTTGATCC TTCTGAGTCA ACTCATGCCA CACTTAAAGG GTTCTTTTAA TCTTTAATCT
421 CCCAGCTTCA TAATCAATTT ATTCCTTTAT TTAGAACCCT AATTTCTGGT CTTTTCGCAA
481 ATCTTGAGAA TGAGATTTCC CAAAATGGCA AAGCGAAGT CAACAATATC AGCGACATTA
541 TGTCAATCGA TTTTGTGTTT CGTTTGTTAT GTGACAAGAC CAGTCCCAT GACACAAATC
601 TTGGCTCTAA TGGACCAAAA CTCTTTGATA TATGGCTGTT GCCTCAACTT GCTCCATTGT
661 TTAGTCTAGG TCTAAAATTT GTGCCGAAGT TTCTGGAAGA TTTAATGTTG CATACTTTTC
721 CCTTGCCATT TTTTCTAGTG AGATCGAATT ACCAGAAGCT TTATGATGCT TTTAGCAAGC
781 ATGCCGAAAG TACACTGAAT GAAGCAGAGA AGAATGGGAT CAAAAGAGAC GAAGCATGCC
841 ACAACTTAGT TTTTCTTGCA GGTTCATG CTTATGGTGG GATGAAAGTT TTATTCCTG
901 CACTGATAAA GTGGGTCGCG AATGGAGGAA AGAGTTTACA CACTCGGCTG GCAATGAAA
961 TCAGGACAAT TATCAAAGAA GAATGTGGGA CCATAACTCT ATCAGCAATC AACAAGATGA
1021 GTTTAGTAAA ATCAGTAGTG TATGAAGTAT TAAGAATTGA ACCTCCAGTT CCATTCCAAT
1081 ATGGTAAAGC CAAAGAAGAT ATCATAATCC AAAGCCATGA TTCAACTTTC TTAGTCAAGA
1141 AAGGTGAAAT GATCTTTGGA TATCAGCCTT TTGCTACAAA AGATCCAAAG ATTTTGTGAC
1201 AACCAGAGGA GTTTATTTCC GAGAGGTTCA TGGCCGAAGG GGAATAATTA TTAAAGTATG
1261 TGTATTGGTC AAATGCAAGA GAGACAGATG ATCCAACGGT GGACAACAAA CAATGCCAG
1321 CGAAAAATCT TGTCGTGCTT TTGTGCAGGT TGATGTTGGT GGAGGTTTTC ATGCGTTACG
1381 ACACATTCAC AGTGGAGTCA ACAAAGCTCT TTCTGGGTC ATCAGTAACG TTCACGACTC
1441 TGGAAAAAGC GACATGAGTT TCAGATATCT TAATTGTAGG CTGCAAAATA TAATGTGGTC
1501 ATCTCGCAA TTATTGTACT TGTGCTGATG

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SEQ. ID. NO. 156

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1 MSSFSTSSAT SNSKLPVREI PGDYGFPPFG AIKDRYDYFY NLGTDEFFLT KMQKYNSTVF
61 RTNMPPGPFI AKNPKVIVLL DAKTFPVLFD NSKVEKMNVL DGTYVPSTDF YGGYRCPAYL
121 DPSESTHATL KGFFLSLISQ LHNQFIPLFR TSISGLFANL ENEISQNGKA NFNNISDIMS
181 FDFVFRLLCD KTSPHDTNLG SNGPKLFDIW LLPQLAPLFS LGLKFVPNFL EDLMLHTFPL
241 PFFLVRSNYQ KLYDAFSKHA ESTLNEAEKN GIKRDEACHN LVFLAGFNAY GGMKVLFPPAL
301 IKWVANGGKS LHTRLANEIR TIIKEECGTI TLSAINKMSL VKSVVYEVLR IEPVPVFQYG
361 KAKEDIIQS HDSTFLVKKG EMIFGYQPFA TKDPKIFDKP EEFI PERFMA EGEKLLKYVY
421 WSNARETDDP TVDNKQCPAK NLVVLCLRLM LVEVFMRYDT FTVESTKLFL GSVTFTTLE
481 KAT

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FIG. 79

NAME D96-AB6
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 157

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1 CCAAAAATGG AGCTTCAATC TTCTCCTTTC AATTTAATTT CTTTGTTCCT CTTCTTTTCT
61 TTTTCATTTT TTCTAGTGAA GAAATGGAAT GCCAAAATCC CAAAGTTACC TCCAGGTCCTG
121 TGGAGGCTTC CCTTTATTGG AAGCCTCCAT CACTTGAAGG GAAAACCTCC ACACCATAAT
181 CTTAGAGATC TAGCGCGAAA ATATGGGCCCT CTCATGTACT TACAACCTCGG AGAAATTCCT
241 GTAGTTGTAA TATCTTCGCC ACGTGTAGCA AAAGCTGTAC TAAAACTCA TGATCTCGCT
301 TTTGCAACTA GACCACGATT CATGTCCTCA GACATTGTGT TTTACAAAAG CAGGGACATC
361 TCTTTTGCCC CATTTGGTGA TTAAGTGGAGA CAGATGCGTA AAATATTGAC TCAGGAACCTC
421 CTGAGTAACA AGATGCTCAA GTCATATAGC TTAATCCGAA AGGATGAGCT CTCGAAGCTC
481 CTCTCATCGA TTCGTTTGGA AACAGGTTCT GCAGTGAACA TAAATGAAAA GCTTCTCTGG
541 TTTACGAGCT GCATGACCTG TAGATTAGCC TTTGGAAAAA TATGCAATGA TCGGGATGAG
601 TTGATCATGC TAATTAGGGA GATATTAACA TTATCAGGAG GATTTGATGT GGGTGATTGT
661 TTCCTTCTCT GGAATTACT TCATAATATG AGCAACATGA AAGCTAGGTT GACGAATGTA
721 CACCACAAGT ATGATTTAGT TATGGAGAAC ATCATCAATG AGCACCAAGA GAATCATGCA
781 GCAGGGATAA AGGGTAACAA CGAGTTTGGT GGCGAAGATA TGATCGATGC TCTACTGAGG
841 GCTAAGGAGA ATAATGAGCT TCAATTTCTT ATCGAAAATG ACAACATGAA AGCAGTAATT
901 CTGGACTTGT TTATTGCTGG AACTGAAACT TCATATACTG CAATTATATG GGCACATCA
961 GAATTGATGA AGCACCACAAG TGTGATGGCC AAGGCACAAG CTGAAGTGAG AAAAGTCTTC
1021 AAAGAAAATG AAAATTTTCA CGAAAATGAT CTGACAAGT TGCCATACTT AAAATCAGTG
1081 ATTAAGAAAA CACTAAGGAT GCACCCCTCA GTTCTTTTGT TAGGGCCTAG AGAATGCAGG
1141 GACCAACACAG AGATCGATGG CTACACTGTA CCTATTAAAG CTAGAGTTAT GGTTAATGCT
1201 TGGGCGATAG GAAGAGATCC TGAAAGTTGG GAAGATCCTG AAAGTTTCAA ACCGGAGCGA
1261 TTTGAAAATA CTTCTGTTGA TCTTACAGGA AATCACTATC AGTTCAATCC TTTTCGTTCA
1321 GGAAGAAGAA TGTGTCCAGG AATGTCGTTT GGTTTAGTTA ACACAGGGCA TCCTTTAGCC
1381 CAGTTGCTCT ATTGCTTTGA CTGGAAACTC CTTGACAAGG TTAATGCAAA TGATTTTCGC
1441 ACTACTGAAA CAAGTAGAGT TTTTGCAGCA AGCAAAGATG ACCTCTACTT GATTTCCACA
1501 AATACAGAGG AGCAAGAATA GCTTAATTTA ATGGAGTTCT TGGAAGAATT AAAGAAGAAG
1561 GGCTATATAG GTGAGATTTT TTGTATGGTT GCA

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SEQ. ID. NO. 158

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1 MELQSSPFNL ISLFLFFSFH FILVKKWNAK IPKLPPGPWR LPFFIGSLHHL KGKLPHHNLR
61 DLARKYGPLM YLQLGEIPVV VISSPRVAKA VLKTHDLAFA TRPRFMSSDI VFYKSRDISF
121 APFGDYWRQM RKILTQELLS NKMLKSYSLI RKDELSKLLS SIRLETGSVA NINEKLLWFT
181 SCMTCRLAFG KICNDRDELI MLIREILTLS GGFDVGDLEP SWKLLHNMNSN MKARLTNVHH
241 KYDLVMENII NEHQENHAAG IKGNNEFGGE DMIDALLRAK ENNELQFPPIE NDNMKAVILD
301 LFIAGTETSY TAIIWALSEL MKHPSVMAKA QAEVRKVFEKE NENFDENDLD KLPYLKSVIK
361 ETLRMHPPVP LLGPRECRDQ TEIDGYTVPI KARVMVNAWA IGRDPESWED PESFKPERFE
421 NTSVDLTGNH YQFIFPGSGR RMCPCGMSFGL VNTGHPLAQL LYCFDWKLPD KVNANDFRFT
481 ETSRVFAASK DDLYLIPTNH REQE

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FIG. 80

NAME D96-AC2
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 159

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1 CTTCTTCCAA AAATGGAGCT TCAATCTTCT CCTTCAATT TAATTTCTTT GTTCCTCTTC
61 TTTTCTTTTC TTTTATTCT AGTGAAGAAA TGGAAATGCCA AAATCCCAAA GTTACCTCCA
121 GGTCCTGGGA GGCTTCCCTT TATTGGAAGC CTCCATCACT TGAAGGGAAA ACTTCCACAC
181 CATAATCTTA GAGATCTAGC GCGAAAATAT GGACCTCTCA TGTAATTACA ACTCGGAGAA
241 ATTCTCTGTAG TTGTAATATC TTCGCCACGT GTAGCAAAAG CTGTACTTAA AACTCATGAT
301 CTCGCTTTTG CAACTAGACC ACGATTTCATG TCCTCAGACA TTGTGTTTTA CAAAAGCAGG
361 GACATCTCTT TTGCCCCATT TGGTGATTAC TGGAGACAGA TCGGTAAAT ATTGACTCAG
421 GAACTCCTGA GTAACAAGAT GCTCAAGTCA TATAGCTTAA TCCGAAAGGA TGAGCTCTCG
481 AAGCTCCTCT CATCGATTCTG TTTGGAAACA GGTCTCGCAG TGAACATAAA TGAAAAGCTT
541 CTCTGGTTTA CGAGCTGCAT GACCTGTAGA TTAGCCTTTG GAAAAATATG CAATGATCGG
601 GATGAGTTGA TCATGCTAAT TAGGGAGATA TTAACATTAT CAGGAGGATT TGATGTGGGT
661 GATTTGTTCC CTTCTGGAA ATTACTTCAT AATATGAGCA ACATGAAAGC TAGGTTGACG
721 AATGTACACC ACAAGTATGA TTTAGTTATG GAGAACATCA TCAATGAGCA CCAAGAGAAT
781 CATGCAGCAG GGATAAAGGG TAACAACGAG TTTGGTGGCG AAGATATGAT CGATGCTCTA
841 CTGAGGGCTA AGGAGAATAA TGAGCTTCAA TTTCTTATCG AAAATGACAA CATGAAAGCA
901 GTAATTCTGG ACTTGTTTAT TGCTGGAACT GAAACTTCAT ATACTGCAAT TATATGGGCA
961 CTATCAGAAAT TGATGAAGCA CCAAGTGTG ATGGCCAAGG CACAAGCTGA AGTGAGAAAA
1021 GTCTTCAAAG AAAATGAAAA TTTCCGACGAA AATGATCTTG ACAAGTTGCC ATACTTAAAA
1081 TCAGTGATTA AAGAAACACT AAGGATGCAC CCTCCAGTTC CTTTGTTAGG GCCTAGAGAA
1141 TGCAGGGACC AAACAGAGAT CGATGGCTAC ACTGTACCTA TTAAAGCTAG AGTTATGGTT
1201 AATGCTTGGG CGATAGGAAG AGATCCTGAA AGTTGGGAAG ATCCTGAAAG TTTCAAACCG
1261 GAGCGATTG AAAATACTTC TGTGATCTT ACAGGAAATC ACTATCAGTT CATTCTTTTC
1321 GGTTCAGGAA GAAGAATGTG TCCAGGAATG TCGTTTGGTT TAGTTAACAC AGGGCATCCT
1381 TTAGCCCACT TGCTCTATTG CTTTGACTGG AAATCCCTG ACAAGGTTAA TGCAATGAT
1441 TTTTCGACTA CTGAAACAAG TAGAGTTTTT GCAGCAAGCA AAGATGACCT CTAATTGATT
1501 CCCACAAATC ACAGGGAGCA AGAATAGCTT AATTTAATGG AGTTCTTGGA AGAATTAAAG
1561 AAGAAGGGCT ATATAGGTGA GATTTTTTGT ATGGTTGCA

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SEQ. ID. NO. 160

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1 MELQSSFFNL ISLFLFFSFL FILVKWNAK IPKLPPGPWR LPFIGSLHLH KGKLPHHNLR
61 DLARKYGPLM YLQLGEIPVV VISSPRVAKA VLKTHDLAFA TRPRFMSSDI VFYKSRDISF
121 APFGDYWRQM RKILTQELLS NKMLKSYSLI RKDELSKLLS SIRLETGSVA NINEKLLWFT
181 SCMTCRLAFG KICNDRDELI MLIREILTLS GGFDVGDLPF SWKLLHNSMN MKARLTNVHH
241 KYDLVMENII NEHQENHAAG IKGNNEFGGE DMIDALLRAK ENNELQFPIE NDNMKAVILD
301 LFIAGTETSY TAIWALSEL MKHPSVMAKA QAEVRKVFKE NENFDENDLD KLPYLKSVIK
361 ETLRMHPPVP LLGPRECRDQ TEIDGYTVPI KARVMVNAWA IGRDPESWED PESFKPERFE
421 NTSVDLTGNH YQFIPFGSGR RMCPSMSEGL VNTGHPLAQL LYCFDWKLPD KVNANDFRFT
481 ETSRVFAASK DDLYLIPTNH REQE

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FIG. 81

NAME D98-AA1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 161

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1 CTTTCTTTCT TGTACCGAGA TGGAGTTTCA ACACTTGGTT TCGTTCCTGC TATTCATCTC
61 CTTTCATCTTT CTTCTAATTC AAAAATGGAG GAAATCGAAA AAGCTGCCAC CTGGTCCGTG
121 GAGGCTACCT ATTATTGGAA GTGTGCATCA CTTGACAAGT GGAGTACCAC ATCGAGTTCT
181 CAGAAATTTA TCACAAAAAT TTGGCCCGAT CATGTACTTG CAGCTCGGGG AAGTCTCCAC
241 AGTAGTTGTA CCCTCCCCAC ACATGGCCAA ACAAAATTTA AAAACTCATG ACCTCGGTTT
301 TGCATCTAGG CCAGAAATCA TGATGGGAAA AATTATTGTC TACGATTGTA AGGACATTGC
361 CTTTCCCGG TATGGTGAT ATGGAGACA TATGCGTAAA TTGAGCACCT TGGAACTACT
421 TAGTGCCAAG ATGGTCAAGT CCTTCAGTCC AATTCGTCAA GATGAGCTCT CAAGTCTCCT
481 ATCATCCATT GAATCAATGG GAAATTGCCC AATCAACTTA GTAGAAAAAC TTTTATGGTT
541 TATGAATGCC GCGACATGTA GGTCAGCATT TGGGAAAGTG TGTAAGATC AAAAAGAGTT
601 GATAACATTG ATTCACGAG CAGAATCATT ATCTGGTGGG TTCGAGCTGG CTGATTTGTT
661 CCCTTCGAAG AAGTTTCTAC ATGGTATTAG TGGGATGCGA TCTAAACTAA TGGAAAGCTCG
721 TAACAAGATA GACGCAGTCT TGGACAACAT TATCAATGTG CACAGAGAGA ATCGGGCAAA
781 TGGAAATAGT TGTAATGGTG AGTCTGGAAC TGTAAGATTTC ATCGATGTTT TTCTAAGGGT
841 CATGGAGAGT GCGCAATTAC CATTTCCGAT AGAAAATGAC AACATCAAAG CAGTTATCTC
901 TGACATGTTT GTAGCAGGAT CTGACACATC ATCTCAACC GTTATTTGGG CATTAACAGA
961 AATGATGAAG AATCCAAAAG TCATGGCTAA AGCACAAGCT GAAGTGAGAG AAGCTTTTAA
1021 AGGAAAGAAA GCATGTGATG AGGATACTGA TCTTGAAAAG CTTCAATTACC TAAATTTAGT
1081 GATCAAAGAG ACACTCCGAT TACACCCTCC AACTCCTCTA CTTGTCCCGC GAGAATGCAG
1141 GGAGGAAACA GAGATAGAAG GATTCATAT ACCATTGAAA AGCAAAGTCT TGGTTAACGT
1201 ATGGGCAATT GGAAGAGATC CCGAGAATTG GAAAAATCCT GAATGTTTTA TACCAGAGAG
1261 ATTCGAAAAA AGTTCTATTG AGTTTACTGG AAATCATTTC CAACTCTTTC CGTTTGCGCG
1321 TGGAAAGACGA ATTTGTCCAG GAATGCAATT TGGTTTGGCT CTTGTACTC TGCCATTGGC
1381 TCATTTGCTT CACAATTTTG ATTGGAAGT TCCCGAAGGA ATTAATGCAA GGGATTTGGA
1441 CATGACAGAG GCAATGGA TATCTGCTAG AAGAGAAAAA GATCTTTACT TGATTGCTAC
1501 TCCTTATGTA TCACCTCTTG ATTAACCTG AAATTTTGCT TTAATGCTGC TTGCTTGCTT
1561 CACT

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SEQ. ID. NO. 162

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1 MEFOHLVSFL LFISIFILLI QKWRKSKLP PGPWRLPIIG SVHHLTSGVP HRVLRNLSQK
61 FGPIMYLQLG EVPTVVVSSP HMAKQILKTH DLAFASRPEI MMGKIICYDC KDIAFSPYGD
121 YWRHMRKLST LELLSAKMVK SFSPIRQDEL SSLSSIESM GNLPINLVEK LLWFMNAATC
181 RSAPGKVCKD QKELITLIQR AESLSGGFEL ADLFPSKKFL HGISGMRSL MEARNKIDAV
241 LDNIINVHRE NRANGNSCNG ESGTVDFIDV FLRVMESEGL PFPIENDNIK AVILDMFVAG
301 SDTSSSTVIW ALTEMMKNPK VMAKAQAEVR EAFKGGKACD EDTDLEKLHY LNLVIKETLR
361 LHPPTPLLPV RECREETEIE GFTIPLKSKV LVNVWAIGRD PENWNKNECF IPERFENSSI
421 EFTGNHFQLL PFGAGRRICP GMQFGLALVT LPLAHLHNF DWKLPEGINA RDLDMTEANG
481 ISARREKDLY LIATPYVSP D

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FIG. 82

NAME D98-AG1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 163

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1 CTTTCTTGTA CCGAGATGGA GTTCAACAC TTGGTTTCGT TCTTGCTATT CATCTCCTTC
61 ATCTTTCTTC TAATTCAAAA ATGGAGGAAA TCGAAAAAGC TGCCACCTGG TCCGTGGAGG
121 CTACCTATTA TTGGAAGTGT GCATCACTTG ACAAGTGGAG TACCACATCG AGTTCCTAGA
181 AATTTATCAC AAAAATTTGG CCCGATCATG TACTTGCAGC TCGGGGAAGT TCCCACAGTA
241 GTTGATCCTT CCCACACAT GGGCAAAACAA ATTTTAAAAA CTCATGACCT CGCTTTTGCA
301 TCTAGGCCAG AAATCATGAT GGGAAAAAATT ATTTGCTACG ATTGTAAGGA CATTGCCCTTT
361 TCCCCGTATG GTGATTATTG GAGACATATG CGTAAATTGA GCACCTTGA ACTACTTAGT
421 GCCAAGATGG TCAAGTCCTT CAGTCCAATT CGTCAAGATG AGCTCTCAAG TCTCCTATCA
481 TCCATTGAAT CAATGGGAAA TTTGCCAATC AACTTAGTAG AAAAAGCTTT ATGGTTTATG
541 AATGCCGCGA CATGTAGGTC AGCATTGGG AAAGTGTGTA AAGATCAAAA AGAGTTGATA
601 ACATTGATTC AACGAGCAGA ATCATTATCT GGTGGATTCT AGCTGGCTGA TTTGTTCCCT
661 TCGAAGAAGT TTCTACATGG TATTAGTGGG ATGCGATCTA AACTAATGGA AGCTCGTAAC
721 AAGATAGACG CAGTCTTGGA CAACATTATC AATGTGCACA GAGAGAATCG GGCAATGGA
781 AATAGTTGTA ATGGTGAGTC TGGAACTGTA GATTTTCATCG ATGTTTTTCT AAGGGTCATG
841 GAGAGTGGCG AATTACCATT TCCGATAGAA AATGACAACA TCAAACGAGT TATTCTTGAC
901 ATGTTCTGTA CAGGATCTGA CACATCATCT TCAACCGTTA TTTGGGCATT AACAGAAAACG
961 ATGAAGAATC CAAAAGTCAT GGCTAAAGCA CAAGCTGAAG TGAGAGAAGC TTTTAAAGGA
1021 AAGAAAGCAT GTGATGAGGA TACTGATCTT GAAAAGCATC ATTACCTAAA TTTAGTGATC
1081 AAAGAGACAC TCCGATTACA CCCTCCAACCT CCTCTACTTG TCCCGCGAGA ATGCAGGGAG
1141 GAAACAGAGA TAGAAGGATT CACTATACCA TTGAAAAGCA AAGTCTTGTT TAACGTATGG
1201 GCAATTGGAA GAGATCCCGA GAATTGGAAT AATCCTGAAT GTTTTATACC AGAGAGATTC
1261 GAAAAATAGT CTATTGAGTT TACTGGAAAT CATTTTCAAC TTCTTCCGTT TGGCGCTGGA
1321 AGACGAATTT GTCCAGGAAT GCAATTTGGT TTGGCTCTTG TTACTCTGCC ATTGGCTCAT
1381 TTGCTTCACA ATTTTGATTG GAAACTTCCC GAAGGAATTA ATGCAAGGGA TTTGGACATG
1441 ACAGAGGCAA ATGGGATATC TGCTAGAAGA GAAAAAGATC TTTACTTGAT TGCTACTCCT
1501 TATGTATCAC CTCTTGATTA ACTCTGAAAT TTTGCTTAA TGCTGCTTGC TTGCTTCACT

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SEQ. ID. NO. 164

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1 MEFOHLVSFL LFISIFILLI QKWRKSKKLP PGPWRLPIIG SVHHLTSGVP HRVLRNLSQK
61 FGPIMYLQLG EVPTVVVSSP HMAKQILKTH DLAFASRPEI MMGKIICYDC KDIAFSPYGD
121 YWRHMRKLST LELLSAKMVK SFSPIRQDEL SSLSSIESM GNLPINLVEK LLWFMNAAATC
181 RSFAFGVKCKD QKELITLIQR AESLSGGFEL ADLFPSKKFL HGISGMRSKL MEARNKIDAV
241 LDNIINVHRE NRANGNSCNG ESGTVDFIDV FLRVMESEGL PFPIENDNIK AVILDMFVAG
301 SDTSSSTVIW ALTETMKNPK VMAKAQAEVR EAFKGGKACD EDTDLEKHHY LNLVIKETLR
361 LHPPPTPLLVP RECREETEIE GFTIPLKSKV LVNVWAIGRD PENWKNPECF IPERFENSSI
421 EFTGNHFQLL PFGAGRRICP GMPFGLALVT LPLAHLHNF DWKLPEGINA RDLDMTEANG
481 ISARREKDLY LIATPYVSPL D

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FIG. 83

NAME D100-BE2
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 165

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1 CAAAAACAAA ATTCCAATGG TTAACATGTT CACTCCAATT ATATACGCTC CTCTCCTTTT
61 AGCTTTTAC ATTATCACAA AACATTCTT ACGCAAATC AGAAATAATC CACCAGCTCC
121 ATTTCTTACT TTCCCCTTTA TTGGCCATCT TTATCTCTTC AAAAACACAC TTCACGCTAC
181 CTTAGCCAAA ATCTCCGAAC GTTATGGCTC TGTCTCTCTA CTGGAATTCG GTTCACGAAA
241 AGTACTTTTG GTTTCTTCAC CATCTGCAGC TGAAGAATGC TTAACAAAAA ACGATATTAT
301 TTTCGCGAAT CGTCTCTTTT TGATGGCTGG AAAACATCTT GGATATAATT TTACATCTTT
361 GGCTTGGAGT TCGTACGGAG ATCATGGAG AAATCTGCGA AGGATTACTT CAGTTGAGAT
421 GTTTTCGACT CATCGTCTTC AAATGCTACA TGGGATTCGT ATTGATGAAG TGAAATCTAT
481 GGTTAAGAGG CTCATTCCCT CTGCCATAGC TGAAAAATCT GTGGATATGA AGTCTATGTT
541 TTTTGAGCTG ATGCTCAATG TTATGATGAG GACAATTGCT GGAAAAAGAT ATTACGGTGA
601 GAATGTGGAG GACATTGAGG AAGCTACGAG ATTCAAAGGT TTGGTGCAAG AGACTTTCAG
661 GATTGGCGGG GCGACGAATA TTGGCGACTT TTTGCCGGCG TTGAAGTTAT TGTTGAGGAA
721 ATTTGGAGAAA AGTTTAATTG TGTGCAAGA GAACAGAGAT GAGTTTATGC AGGAATTAAT
781 TAAAGATTGC AGAAAAAGAA TGGAGAAAGA AGGTACTGTT ACTGATTTCAG AAATTGAAGG
841 GAACAAGAAA TGTTTAATTG AAGTTTGTGTT AACACTACAA GAAATGAAC CGGAATACTA
901 CAAAGATGAA ATCATCAGAA GCCTTATGCT TGTCTATTA TCAGCTGGTA CAGATACTTC
961 AGTTGGGACA ATGGAATGGG CTTTATCATT AATGTTAAAC CACCTGAAA CTCTGAAGAA
1021 AGCACAAGCT GAAATTGATG AACATATAGG ACATGAACGT TTAGTGACG AGTCGGACAT
1081 CAACAACCTA CCTTACCTAC GTTGATAAT CAACGAGACA TTCCGAATGT ACCCTGCAGG
1141 ACCACTACTA GTCCACACAG AGTCGTCAGA GGAACCACCG GTAGGAGGCT ACCGTGTACC
1201 CGGAGGAACC ATGTTACTTG TGAATTTGTG GGCAATTCAC AATGATCCAA AGCTATGGGA
1261 TGAACCAAGA AAGTTTAAAC CAGAAAGATT TCAAGGACTA GATGGTGTTA GAGATGGTTA
1321 CAAAATGATG CCTTTTGGTT CTGGACGAAG GAGTTGTCTT GGAGAAGGAT TGGCTGTTCTG
1381 AATGGTTGCC TTGTCTATGG GATGTATTAT TCAATGTTTT GATTGGCAAC GAATCGGCGA
1441 AGAATTGGTT GATATGACTG AAGGAACTGG ACTTACTTTG CCTAAAGCTC AACCTTGGT
1501 GGCCAAGTGT AGCCACGAC CTAATAATGG TAATCTTCTC TCTCAGATTT GA

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SEQ. ID. NO. 166

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1 MVNMFPIIY APLLLAFYII TKHFLRKLRL NPPAPFLTFP FIGHLYLFKK PLQRTLAKIS
61 ERYGSVLLLE FGSRKVLLVS SPSAAEECLT KNDIIFANRP LLMAGKHLGY NFTSLAWSSY
121 GDHWRNLRRI TSVEMFSTHR LQMLHGIRID EVKSMVKRLN SSAIAEKSVD MKSMFFELML
181 NVMMRTIAGK RYGENVEDI EEATRFKGLV QETFRIGGAT NIGDFLPALK LLVRKLEKSL
241 IVLQENRDEF MQELIKDCRK RMEKEGTVTD SEIEGNKKCL IEVLLTLQEN EPEYYKDEII
301 RSLMLVLLSA GTDTSVGTME WALSLMLNHP ETLKKAQAEI DEHIGHERLV DESDINNLPY
361 LRCIINETFR MYPAGPLLVP HESSEETTVG GYRVPGGTML LVNLWAIHND PKLWDEPRKF
421 KPERFQGLDG VRDGYKMMPF GSGRRSCPGE GLAVRMAVALS LGCIIQCFDW QRIGEELVDM
481 TEGTGLTLPK AQPLVAKCSP RPKMANLLSQ I

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FIG. 84

NAME D100A-AC3
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 167

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1 CAAAAACAAA ATTCCAATGG TTAACATGTT CACTCCAATT ATATACGCTC CTCTCCTTTT
61 AGCTTTTTTAC ATTTATCACAA AACATTCTTT ACGCAAATC AGAAATAACC CACCAGCTCC
121 ATTTCTTACT TTCCCCTTTA TTGGCCATCT TTATCTCTTC AAAAAACCAC TTCAACGTAC
181 CTAGCCAAA ATCTCCGAAC GTTATGGCTC TGTCTCTCTA CTCGAATTCG GTTCACGAAA
241 AGTACTTTTG GTTTCTTCAC CATCTGCAGC TGAAGAATGC TTAACAAAAA ACGATATTAT
301 TTTGCGGAAT CGTCTCTTT TGATGGCTGG AAAACATCTT GGATATAATT TTACTTCTTT
361 GGCTTGGAGT TCGTACGGAG ATCACTGGAG AAATCTTCGT AGGATTACTT CAGTTGAGAT
421 GTTTTCGACT CATCGTCTTC AAATGCTACA TGGAAATCGT ATTGATGAAG TGAATCTAT
481 GGTAAAGAGG CTCATTCCCT CTGCCATAGC TGAATAATCT GTGGATATGA AGTCTATGTT
541 TTTTGAGCTG ATGCTCAATG TTATGATGAG GACAATTGCT GGAAAAAGAT ATTACGGTGA
601 GAATGTGGAG GACATTGAGG AAGCTACGAG ATTCAAAGGT TTGGTGCAAG AGACTTTCAG
661 GATTGGCGGG GCGACGAATA TTGGCGACTT TTTGCCGGCG TTGAAGTTAT TGGTGAGGAA
721 ATTGGAGAAA AGTTTAATTG TGTGCAAGA GAACAGAGAT GAGTTTATGC AGGAATTAAT
781 TAAAGATTGC AGAAAAAGAA TGGAGAAAGA AGGTACTGTT ACTGATTCAG AAATTGAAGG
841 GAACAAGAAA TGTTTAATTG AAGTTTGT TAACTACAA GAAAAATGAAC CGGAATACTA
901 CAAAGATGAA ATCATCAGAA GCCTTATGCT TGTCTATTA TCAGCTGGTA CAGATACTTC
961 AGTTGGGACA ATGGAATGGG CTTTATCATT AATGTTAAAC CACCTGAAA CTCTGAAGAA
1021 AGCACAAGCT GAAATTGATG AACATATAGG ACATGAACGT TTAGTGGACG AGTCGGACAT
1081 CAACAACCTA CCTTACCTAC GTTGATAAT CAACGAGACA TTCCGAATGT ACCCTGCAGG
1141 ACCACTACTA GTCCACACAG AGTCGTCAGA GGAACCACC GTAGGAGGCT ACCGTGTACC
1201 CGGAGGAACC ATGTTACTTG TGAATTTGTG GGCTATTCAC AATGATCCAA AGCTATGGGA
1261 TGAACCAAGA AAGTTTAAGC CAGAAAGATT TGAAGGACTA GAAGGTGTTA GAGACGGTTA
1321 CAAATGATG CCTTTTGGTT CTGGACGAAG GAGTTGCTCT GGAGAAGGAT TGGCTATTTCG
1381 AATGGTTGCA TTGTCAATGG GATGTATTAT TCAATGCTTT GATTGGCAAC GACTTGGGGA
1441 AGGATTGGTT GATAAGACTG AAGGAACTGG ACTTACTTTG CCTAAAGCTC AACCTTTAGT
1501 GGCCAAAGTG AGCCACGAC CTATAATGGC TAATCTTCTT TCTCAGATTT GAACATAATT
1561 GGTTCCTACC AAACATCCCC AACTAGAAAT ATTATTATTG GTTACATATA CAATGTAATC
1621 AATTTTGAAC CATATTATAT CTCAATGTAT TCCTTTTTAA AAAAAAAAAA AAAAA

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SEQ. ID. NO. 168

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1 MVNMFTPIY APLLLAFYII TKHFLRKL RN NPPAPFLTFP FIGHLYLFKK PLQRTLAKIS
61 ERYGSVLLLE FGSRKVLLVS SPSAAECLT KNDIIFANRP LLMAGKHLGY NFTSLAWSSY
121 GDHWRNLRI TSVMFSTHR LQMLHGIRID EVKSMVKRLN SSAIAEKSDV MKSMFFELML
181 NVMMRTIAGK RYYGENVEDI EEATRFKGLV QETFRIGGAT NIGDFLPALK LLVRKLEKSL
241 IVLQENRDEF MQELIKDCRK RMEKEGTVD SEIEGNKKCL IEVLLTLQEN EPEYYKDEII
301 RSLMLVLLSA GTDTSVGTME WALSLMLNHP ETLKKAQAEI DEHIGHERLV DESDINNLPY
361 LRCLINETFR MYPAGPLLVP HESSEETTVG GYRVPGGTML LVNLWAIHND PKLWDEPRKF
421 KPERFEGLEG VRDGYKMPF GSRRSCPGE GLAIRMVALS LGCIQCQFDW QRLGEGLVDK
481 TEGTGLTLPK AQPLVAKCSP RPIMANLLSQ I

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FIG. 85

NAME D104A-AE8 (69,1755)
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 169

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1 CAACACGCTT ACTATCTCCT AAATCTCCAC TCAAAAACAA AGAAGAGAAA GATTTAAAC
61 TAATAATTAT GAAAGAGATG GTGCAAAACA ATATGAGCAC TTCTCTCTT GAAACTTTAC
121 AAGCTACGCC CATGATATTC TACTTCATCG TCCCTCTCTT CTGCTTATTC CTTCTCTCCA
181 AATCTCGCCG TAAACGTTTG CCTCCAGGTC CAACTGGCTG GCCTCTCATT GGTAAACATGA
241 TGATGATGGA CCAGTTAACT CACCGTGGCC TTGCCAAACT AGCCCCAAAA TATGCTGGTG
301 TTTTTCACCT TAAATGGGT TATGTTTACA AAATGTAGT CTCTGGTCCA GACGAAGCTC
361 GCCAAGTATT ACAGGAACAC GACATCATAT TTTGCAACCG TCCAGCGACC GTAGCCATAA
421 GTTACCTAAC ATATGACAGG GCAGACATGG CTTTGTGTA CTATGGACTC TCTGGCGGC
481 AGATGAGAAA ACTATGTGTA ATGAACTCT TCAGCCGCAA ACGAGCTGAG TCATGGGACT
541 CAGTTCGAGA CGAAGCGGAT TCCATGGTTA GAATGTAAC AACCAACACA GGCACAGCTG
601 TTAACCTAGG TGAACCTGTT TTCAGTCTCA CTCGTAATAT TATCTACAGA GCTGCTTTTG
661 GAACCTTGTT TGAAGATGGA CAAGCGAGT TCATTAATAA TATGCAAGAG TTTTCGAAGC
721 TATTTGGTGC TTTCAATATA GCTGATTTTA TTCCATGGCT AGGGTGGGTT GGTAAAGCAGA
781 GTCTAAATAT TAGACTTGCT AAGGCTAGAG CGTCGCTTGA TGGGTTTATT GATTTCGATTA
841 TTGATGACCA TATTATTAGA AAGAAAGCTT ATGTTAATGG CAAAAATGAT GGAGGTGATC
901 TGAAACTGTA TATGGTGGAT GAGCTTTTAG CTTTTTACAG TGAGGAAGCA AAAGTAACCTG
961 AGTCCGAAGA TTTGCAGAAT GCTATCAGAC TTAATAAGGA TAATATCAAA GCTATCATCA
1021 TGGATGTAAT GTTTGGAGGG ACAGAAACAG TGGCTTCTGC AATAGAATGG GCCATGGCAG
1081 AGCTTATGAG GAGTCTGAA GATCTTAAAA AGGTACAACA AGAGCTGGCT AACGTTGTTG
1141 GACTCAACAG AAAAGTTGAA GAATCTGACT TTGAAAAATT AACATACTTA AGATGTTGTC
1201 TAAAGAAAC TCTACGACTT CACCTCCAA TCCCTCTCCT CCTCCATGAG ACCGCCGAGG
1261 AATCCACCGT CTCCGGCTAC CATATTCCGG CAAAGTCACA TGTATTATAA AATTCATTG
1321 CCATTGGGCG TGACAAAAAT TCATGGGAAG ATCCTGAAAC TTATAAACCA TCTAGGTTTC
1381 TCAAAGAAGG TGTACCAGAT TTAAAGGAG GTAATTTTGA GTTTATACCA TTTGGGTCGG
1441 GTCGGCGGTC TTGCCCCGGT ATGCAACTTG GGCTTTATGC ATTGGAATG GCTGTGGCCC
1501 ATCTTCTTCA TTGTTTACT TGGGAATTGC CAGATGGTAT GAAACCAAGT GAGCTTAAAA
1561 TGATGATAT TTTTGGACT ACTGCTCAA GAGCTAATCG ACTCGTGGCT GTGCTACTC
1621 CACGTTTGTG GTGTCCCCTT TATTAATTGA AGAAAAAGG TGGGGCTTTT ACTTGCATCA
1681 AAGAGTGGTG CTTGTGATTT TTCCACCTTT TGGTTAAATA TACGAATTAT TATGATATAC
1741 GAATCTTGG GCACA

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SEQ. ID. NO. 170

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1 MKEMVQNMS TSLLETLOAT PMIFYFIVPL FCLFLLSKSR RKRLPPGPTG WPLIGNMMM
61 DQLTHRGLAK LAQKYGGVFH LKMGYVHKIV VSGPDEARQV LQEHDIIFSN RPATVAISYL
121 TYDRADMFAF DYGLFWRQMR KLCVMKLFSS KRAESWDSVR DEADSMVRIV TTNTGTAVNL
181 GELVFSLTRN IIYRAAFGTC SEDGQGEFIK IMQEFKSLFG AFNIADFI PW LGWVGKQSLN
241 IRLAKARASL DGFIDSIIDD HIIRKKAYVN GKNDDGDRER DMVDELLAFY SEEAKVTESE
301 DLQNAIRLTK DNIAIIMDV MFGGTETVAS AIEWAMAEML RSPEDLKKVQ QELANVVGLN
361 RKVEESDFEK LTYLRCCLEK TLRHPPPIPL LLHETAEST VSGYHIPAKS HVIINSFAIG
421 RDKNSWEDPE TYKPSRFLKE GVPDFKGGNF EFIPFGSGRR SCPGMLGLY ALEMAVAHLL
481 HCFWELPDG MKPSLEKMD IFGLTAPRAN RLVAVPTPRL LCPLY

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FIG. 86

NAME D105-AD6
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 171

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1 TGTGCTTGTG AGTGTGGGAG AAGGCCTTCA ATATGGAGAT ACCATATTAC AGCTTAAAAA
61 TTGCAATTC TTCATTGCA ATTATCTTTG TACTAAGATG GGCATGGAAA ATCTTGAATT
121 ATGTGTGGTT AAAACCAAAA GAATTGGAGA AATACCTCAG ACAGCAGGGT TTCAAAGGAA
181 ACTCTTACAA ATTCTTGTGTT GGGGATATGA AAGAGATGAA GAAAATGGGT GAAGAAGCTA
241 TGTCTAAGCC AATCAATTTC TCTCATGACA TGATTTGGCC TAGAGTTATG CCATTTCATCC
301 ACAAACCAT CACCAATTAT GGTAAGAAAT GTATTGTGTG GTTTGGGCCA AGACCAGCAG
361 TCCTGATCAC AGACCCGGAA CTTGTAAAGG AGGTGCTAAC GAAGAATTC GTCTATCAGA
421 AGCCGCTTGG CAATCCACTG ACAAAGTTGG CAGCAACTGG AATTGCAGGC TATGAAACAG
481 ATAAATGGGC TACACATACA AGGCTTCTCA ATCCTGCTTT TCACCTTGAC AAGTTGAAGC
541 ATATGCTACC TGCATTCCAA TTTACTGCTA GTGAGATGTT GAGCAAATTG GAGAAAGTTG
601 TTTCAACAAA CGGAACAGAG ATAGATGTGT GGCCATATTT ACAAACCTTG ACAAGTGATG
661 CCATTTCAAG AACTGCGTTT GGAAGTAGTT ATGAAGAAGG AAGAAAGATT TTTGACCTTC
721 AAAAAGAACA ACTTTCACFA ATCTAGAAG TTTCAACGCA AATATATATT CCAGGATGGA
781 GGTTTTTGCC AACGAAAAGG AACAAAAGGA TGAAGCAAAT ATTTAATGAA GTACAGGCAC
841 TGGTATTTGG AATTATTAAG AAAAGGATGA GTATGATTGA AAATGGAGAA GCACCTGATG
901 ATTTATTGGG AATATTATTG GCATCCAATT TAAAAGAAAT CCAACAACAT GGAACAACA
961 AGAAATTTGG TATGAGTATT GATGAGGTGA TTGAAGAGTG TAAACTCTTC TATTTTGCTG
1021 GGCAAGAGAC TACTTCATCT TTAATTGTAT GGACTATGAT TTTGTGTGTC AAATATCCTA
1081 ATTTGGCAAGA TAAAGCTAGA GAAGAGGTTT TGCAAGTGTG TGGGAGTAGG GAAGTTGACT
1141 ATGACAAGTT GAATCAGCTA AAAATAGTAA CTATGATCTT AAACGAGGTC TTAAGGTTGT
1201 ATCCAGCAGG ATATGTGATT AATCGAATGG TAAACAAGA AACAAAGTTA GGAATTTGT
1261 GTTTACCAGC CGGCGTACAG CTCGTGTTAC CAACAATGTT GTTGCAACAT GATATCGAAA
1321 TATGGGGAGA TGATGCAATG GAGTTCAATC CAGAGAGATT TAGTGATGGA ATATCCAAAG
1381 CAACAAAAGG AAAACTTGTG TTTTTCAT TTAGTTGGGG TCCAAGAATA TGTATTGGGC
1441 AAAATTTTGC TATGTTAGAG GCTAAAATGG CAATGGCTAT GATTCTGAAA ACCTATGCAT
1501 TTGAACCTCT TCCATCTTAT GCTCATGCTC CTCATCCACT ACTACTTCAA CCTCAATATG
1561 GTGCTCAATT AATTTTGTAC AAGTTGTAGA TATGGTCAAT TTGGAAGTTG TTAGGAACT
1621 TTTATCATTG TAATCAACCA TATTGAGGGA ACATGGTTTG AGGTTAAATC CTCGTGTGTG
1681 TGTC

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SEQ. ID. NO. 172

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1 MEIPYSLKI AISSFAIEF LRWAWKILNY VWLKPKELEK YLRQQGFKN SYKFLFGDMK
61 EMKKMGEEAM SKPINFSDM IWPRVMPFIH KTITNYGKNC IWVFGPRPAV LITDPELVKE
121 VLTKNFVYQK PLGNPLTKLA ATGIAGYETD KWATHRRLLN PAFHLDKLLH MLPAFQFTAS
181 EMLSKLEKV SPNGTEIDVW PYLQTLTSDA ISRTAFGSSY EEGRKIFDLQ KEQLSLILEV
241 SRTIYIPGWR FLPTKRNRKM KQIFNEVRAL VFGIIKKRMS MIENGEAPDD LLGILLASNL
301 KEIQQHGNK KFGMSIDEVI EECKLFYFAG QETTSLLVW TMILLCKYPN WQDKAREEVL
361 QVFGSREVDY DKLNLQKIVT MILNEVLRLY PAGYVINRMV NKETKLGNL LPAQVQLVLP
421 TMLLQHDTEI WGDDAMEFNP ERFSDGSKA TKGKLVFFPF SWGPRICIGQ NFAMLEAKMA
481 MAMILKTYAF ELSPSYAHAP HPLLLQPQYG AQLILYKL

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FIG. 87

NAME D109-AH8 (14,1697)
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 173

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1 CCAGCACCAA GACATGGAGA ATTCCTGGGT AGTTTTAGCC TTAACAGGCC TTCTTACATT
61 AGTTTTTCTC TCAAAGTTTC TTCATAGTCC TCGTCGTAAA CAAATCTTC CACCAGGTCC
121 AAAACCATGG CCTATTGTTG GCAATATACA TCTTCTTGTT TCCACCCCTC ACAGATCCCT
181 TCACGAACTT GCAAAAAGAT ACGGAGATTT AATGCTACTA AAGTTCGGTT CGCGCAATGT
241 CCTTATTTTA TCCTCCCCAG ATATGGCTAG AGAATTCCTG AAAACAAATG ATGCCATTG
301 GGCTTCTCGC CCTGAGCTTG CCGCTGGTAA ATATACTGCT TATAATTATT GCGACATGAC
361 ATGGGCACGT TATGGACCCT TTTGGAGACA AGCAAGGAGG ATCTATCTCA ACGAGATTTT
421 CAATCCTAAA CGTTTGGATT CATTTGAGTA CATTCGCATA GAGGAAAGGC ATAATTGAT
481 TTCACGTCTT TTTGTTCTCT CTGGGAAGCC AATCTTCTT AGAGACCATT TAACTCGGTA
541 CACTCTTACA AGTATAAGTA GAACAGTATT GAGTGGAAAA TATTTTAGCG AGTCACCTGG
601 CCAAAATTCA ATGATAAATT TGAACAATT GCAGGATATG CTTGATAAGT GGTTTTGTG
661 TAATGGTGTG ATCAATATTG GGGACTGGAT ACCTTGGCTT GCTTCTTGG ATTTGCAGGG
721 TTATGTCAAG CAAATGAAGG AGTTGCATAG GAACCTCGAC AAATTTTATA ACTTTGTGCT
781 AGATGATCAC AAGGCTAATA GGGGAGAGAA GAACCTTGTG CCAAGAGACA TGGTCGATGT
841 TTTGCTGCAG CAAGCTGAGG ATCCTAATCT TGAGGTCAA CTCACCAATG ATTGTGTCAA
901 GGGTCTAATG CAGGACTTAT TGGCTGGCGG CACGGACACC TCAGCAACAA CCGTTGAATG
961 GGCTTTTTAT GAACCTCTTA GACAACCTAA GATTATGAAG AAAGCACAA CAGAGCTAGA
1021 CCTTGTCAAT TCACAGGACA GATGGGTTC AAAAAAGAT TACACTCAAC TCCCTTACAT
1081 TGAGTCAATG ATCAAGGAAA CATTGAGGCT TCACCCAGTA AGCACCATGC TTCCACCGCG
1141 CATTGCCCTT GAGGATTGTC ATGTAGCAGG CTATGACATA CCTAAAGGTA CAATTTTAAT
1201 TGTGAACACT TGGAGTATTG GAAGAAATTC ACAGCATTTG GAGTCACCAG AAGAATTCCT
1261 TCCGGAGAGG TTTGAAGGGA AGAATATTGG TGTCACAGGA CAACATTTTG CGCTCTTGGC
1321 ATTTGGCGCG GGCCGGAGAA AGTGCCAGG ATACAGTCTT GGGATTCTGA TAATTAGGGC
1381 AACTTTAGCT AACTTGTGTC ATGGATTCAA CTGGAGATTG CCTAATGGTA TGAGTCCAGA
1441 AGACATTAGC ATGGAAGAGA TTTATGGGCT AATTACACAC CCCAAAGTCG CACTTGACGT
1501 GATGATGGAG CCTCGACTTC CCAACCATCT TTACAAATAG TGGATAATTA AAACCATTA
1561 AATCGTTTTG TTATATGCAT GTCTCATATT TGTAGTGGTC AAAATGTTT TTTTCTATCA
1621 TGGATGTTCA GTGCGAGGTT GGAATTTCA AGTCATTAAC GTGTGAAAAT ATTTTAAATT
1681 TAAAAA AAAA

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SEQ. ID. NO. 174

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1 MENSWVVLAL TGLLTIVFLS KFLHSPRRKQ NLPPGPKPWP IVGNIHLGGS TPHRSLHELA
61 KRYGDLMLLK FGSRNVILS SPDMAREFLK TNDAIWASRP ELAAGKYTAY NYCDMTWARY
121 GPFWRQARRI YLNEIFNPKR LDSFEYIRIE ERHNLISRLF VLSGPKILLR DHLTRYTLTS
181 ISRTVLSGKY FSESPQNSM ITLKQLQDML DKWFLNGLVI NIGDWIPWLA FLDLQGYVKQ
241 MKELHRNFDK FHNFLVLDHK ANRGEKNFVP RDMVDVLLQQ AEDPNLEVKL TNDVCVKGLMQ
301 DLLAGGTDTS ATTVEWAFYE LLRQPKIMKK AQQELDLVIS QDRWVQEKDY TQLPYIESII
361 KETLRLHPVS TMLPPRIALE DCHVAGYDIP KGTLILVNTW SIGRNSQHW E SPEEFLPERF
421 EGKNIGVTGQ HFALLPFGAG RRCPCGYSLG IRIIRATLAN LLHGFNWRLP NGMSPEDISM
481 EEIYGLITHE KVALDVMMEP RLPNHLKY

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FIG. 88

NAME D110-AF12 (166,1631)
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 175

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1 ACTGTTCAAA TCACAGTAAC AGCATCTTGT GCTGCCATAA TAATTACTCT AGTGGTGTGT
61 ATATGGAGAG TGCTGAAATTG GGTTTGGTTC AGACCAAAGA AGCTGGAAAA GCTACTGAGG
121 AAACAAGGTC TCAAAGGCAA TTCCTACAGG ATTTTGTATG GGGATATGAA GGAGCTTTCT
181 GGTATGATTA AGGAAGCTAA CTCCAAACCC ATGAATCTTT CTGATGATAT TGCCCCAAGA
241 TTGGTCCCTT TCTTCTTGA TACCATCAAG AAATATGGGA AAAAATCCTT TGTATGGTTG
301 GGTCCAAAAC CGCTGGTTTT TGTCATGGAC CCCGAGCTTA TAAAGGAAGT ATTCTCCAAA
361 AACTATCTGT ATCAAAAGCC TCATTCAAAT CCATTAACCA AGTTACTGGC ACAAGGACTT
421 GTAAGCCAAAG AGGAAGACAA ATGGGCCAAA CATAGAAAAA TCGTCACTCC TGCCTTCCAC
481 CTGGAGAAGC TAAAGCATAT GCTTCCAGCT TTTTGTGTTGA GCTGTACTGA GATGCTGAGC
541 AAATGGGAAG ACATTGTTGC AGTTGAGGGC TCACATGAGA TAGATATATG GCCTGGCCTT
601 CAACAATTAA CTAGTGATGT GATCTCTCGG ACAGCCTTTG GCAGTAGCTA TGAAGCAGGT
661 AGAAGGATAT TTGAATTCA AAAGGAACAA GCTCAATTC TATGGAAGC TATACGCTCC
721 GTTTATATTC CAGGCTGGAG GTTTTGGCCA ACAAAGAGGA ACAGAAGAAT GAAGGAAATT
781 GAAAGGATG TTCAAGCCTT AGTTAGAGGT ATTATTGATA AAAGAGTAAA GTCAATGAAA
841 GCAGGAGAGG TGAATAATGA GGATCTGCTT GGTATATTGC TGGAACTTAA TTTTAAAGAA
901 ATTGAACAGC ATGGAAACAA GGATTTTGA ATGAGCATTG AAGAAGTCAT TCAAGAATGC
961 AAGTTATTCT ATTTTGTCTG CCAAGAACT ACATCAGTGT TGCTTGTATG GACTCTAATA
1021 TTGCTGAGCA GGCATCAGGA TTGGCAAGCA CTGGCCAGAG AAGAGGTGTT GCAAGTCTTT
1081 GGGAAATCAGA AACCAGATT TGTATGGATTA AATCGTCTAA AAATTGTTAC AATGATCTTG
1141 TACGAGTCTT TAAGGCTCTA TCCCCCAGTA GTGACACTTA CCCGAAGGCC TAAGGAAGAC
1201 ACTGTATTAG GAGATGTATC TCTACCAGCA GGTGTGTTAA TCTCCTTACC AGTGATCTTA
1261 TTGCATCAGC ACGAAGAGAT ATGGGGTAAA GATGCAAAGA AGTTCAAGCC AGAGAGATTG
1321 AGAGATGGAG TCTCAAGTGC AACAAAGGGT CAAGTCACCT TTTTCCCAT TACTTGGGGT
1381 CCCAGAATAT GCATTGGACA AAATTTTGCC ATGTAGAAG CAAAGACTAC TTTGGCTATG
1441 ATCCTACAAC GCTTCTCCTT TGAAGTGTCT CCATCTTATG CACATGCTCC TCAGTCCATA
1501 ATAACCTTGC AACCCAGTA TGGTGCTCCA CTTATTTTGC ATAAATATA GTTTATTACT
1561 TGTAAGTAGT GTCTCGTTTT ATGTTAAGCA TGAGTCCAAA ATGTTAAGGC TTGTAGAACT
1621 GCAAATGGG A

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SEQ. ID. NO. 176

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1 MKELSGMIKE ANSKPMNLSD DIAPRLVFFF LDTIKKYGKK SFVWLGPKPL VFVMDPELIK
61 EVFSKNLYQ KPHSNPLTKL LAQGLVSQEE DKWAKHRKIV TPAFHLEKHK HMLPAFCLSC
121 TEMLSKWEDI VAVEGSHEID IWPLQLQTS DVISRTAFGS SYEAGRRIFE LQKEQAQFLM
181 EAIRSVYIPG WRFLPTKRNR RMKEIEKDVQ ALVRGIIDKR VKSMKAGEVN NEDLLGILLE
241 SNFKEIEQHG NKDFGMSIEE VIQECKLEYF AGQETTSVLL VWTLLLSRH QDWQALAREE
301 VIQVFGNQKP DFDGLNRLKI VTMIYESLR LYPPVVTILTR RPKEDEVGLD VSLPAGVLIS
361 LPVILLHDE EIWGKDAKKF KPERFRDGS SATKGQVTFP PFTWGPRI CI QGNFAMLEAK
421 TTLAMILQRF SFELSPSYAH APQSIITLQP QYGAPLILHK I

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FIG. 89

NAME D112-AA5
 ORGANISM NICOTIANA TABACUM

SEQ. ID. NO. 177

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1 ATTTATCTCT GAAATGCAA TTCTTCAGCT TGGTTTCCAT TTTCCTATTC CTATCTTTCC
61 TATTTTGTGTT GAGGAAATGG AAGAACTCCA ATAGCCAAAG CAAAAAATTG CCACCAGGTC
121 CATGGAAAAT ACCAATACTA GGAAGTATGC TTCATATGAT TGGTGGAGAA CCGCACCATG
181 TCCTTAGAGA TTTAGCCAAA AAAGATGGAC CACTTATGCA CCTTCAGTTA GGTGAAATTT
241 CTGCAGTTGT GGTACTTCT AGGGACATGG CAAAAGAAGT GCTAAAAACT CATGACGTCG
301 TTTTGGCATC TAGGCCTAAA ATTGTAGCCA TGGACATTAT CTGTTATAAC CAGTCCGACA
361 TTGCCTTTAG CCCTTATGGC GACCACTGGA GACAAATGCG TAAAAATTGT GTCATGGAAC
421 TTCTCAATGC AAAGAATGTT CGGTCTTTCA GCTCCATCAG ACGTGATGAA GTCGTTCTGC
481 TCATTGACTC TATCCGGTCA GATTCTTCTT CAGGTGAGCT AGTTAATTTT ACGCAGAGGA
541 TCATTTGGTT TGCAAGCTCC ATGACGTGTA GATCAGCATT TGGGCAAGTA CTCAAGGGGC
601 AAGACATATT TGCCAAAAAG ATCAGAGAAG TAATAGGATT AGCAGAAGGC TTTGATGTGG
661 TAGACATCTT CCCTACATAC AAGTTTCTTC ATGTTCTCAG TGGGATGAAG CGTAAACTTT
721 TGAATGCCCC CTTAAGGTA GACGCCATTG TTGAGGATGT CATCAACGAG CACAAGAAAA
781 ATCTTGACAG TGGCAAGAGT AATGGCGCAT TAGGAGGCGA AGATCTAATT GATGTCCTAC
841 TGAGACTTAT GAATGACACA AGTCTTCAAT TTCCCATCAC CAACGACAAT ATCAAAGCTG
901 TTGTTGTTGA CATGTTTGCT GCCGGAACAG AAACCTTCATC AACAACAACCT GTATGGGCCA
961 TGGCTGAAAT GATGAAGAAT CCAAGTGAT TCGCCAAAGC TCAAGCAGAA GTGCAGAGAAG
1021 CCTTTAGGGA CAAAGTATCT TTTGATGAAA ATGATGTGGA GGAGCTGAAA TACTTAAAGT
1081 TAGTCATTAA AGAACTTTG AGACTTCATC CACCGTCTCC ACTTTTGGTC CCAAGAGAAT
1141 GCAGGGAAGA TACGGATATA AACGGCTACA CTATTCCTGC AAAGACCAA GTTATGGTTA
1201 ATGTTTGGGC ATTGGGAAGA GATCCAAAAT ATTGGGATGA CGCGGAAAGC TTTAAGCCAG
1261 AGAGATTTGA GCAATGTTCT GTAGATATTT TTGTAATAA TTTTGAAGTTT CTTCCCTTTG
1321 GCGGGGGACG GAGAATTTGT CCTGGAATGT CATTGTTGTT AGCTAATCTT TACTTACCAT
1381 TGGCTCAATT ACTCTATCAC TTTGACTGGA AACTCCCAAC CGGAATCAAG CCAAGAGACT
1441 TGGACTTGAC CGAATTATCG GGAATAACTA TTGCTAGAAA GGGTGACCTT TACTTAAATG
1501 CTACTCCTTA TCAACCTTCT CGAGAGTAAT TTACTATTGG CATAAACATT TTAATTTCC
1561 TTCATCAACC TC

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SEQ. ID. NO. 178

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1 MQFFSLVSIF LFLSFLFLLR KWKNSNSQSK KLPPGPWKIP ILGSMMLHMIG GEPHHVLRDL
61 AKKDGPIMLH QLGEISAVVV TSRDMAKEVL KTHDVVFASR PKIVAMDIIC YNQSDIAFSP
121 YGDHWRQMRK ICMELLNAK NVRSFSSIRR DEVVRLIDS I RSDSSSELV NFTQRIIWFA
181 SSMTCRSAFG QVLKGQDIFA KKIREVIGLA EGFVDVDFP TYKFLHVLSG MKRKLNAHL
241 KVDAIVEDVI NEHKKNLAAG KSNALGGED LIDVLLRLMN DTSLFQFPITN DNIAKVVVDM
301 FAAGTETSST TTVWAMAEMM KNPSVFAKAQ AEVREAFRDK VSFENDVEE LKYLKLVKE
361 TLRHPPSPPL LVPRECREDT DINGYTIPAK TKVMNVWAL GRDPKYWDDA ESFKPERFEQ
421 CSVDIFGNF EFLPFGGRR ICPGMSFGLA NLYLPLAQLL YHFDWKLPTG IKPRDLDLTE
481 LSGITIARKG DLYLNATPYQ PSRE

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FIG. 90

NAME D120-AH4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 179

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1 ATAATGCTTT CTCCCATAGA AGCCATTGTA GGACTAGTAA CCTTCACATT TCTCTTCTTC
61 TTCCTATGGA CAAAAAATC TCAAAAACCT TCAAAAACCT TACCACCGAA AATCCCGGA
121 GGATGGCCGG TAATCGGCCA TCTTTTCCAC TTCAATGACG ACGGCGACGA CCGTCCATTA
181 GCTCGAAAAC TCGGAGACTT AGCTGACAAA TACGGCCCGG TTTTCACTTT TCGGCTAGGC
241 CTTCCTCTTG TCTTAGTTGT AAGCAGTTAC GAAGCTGTAA AAGACTGTTT CTCTACAAAT
301 GACGCCATTT TTTCCAATCG TCCAGCTTTT CTTTACGGCG ATTACCTTGG CTACAATAAT
361 GCCATGCTAT TTTTGCCCAA TTACGGACCT TACTGGCGAA AAAATCGAAA ATTAGTTATT
421 CAGGAAGTTC TCTCCGCTAG TCGTCTCGAA AAATTCAAAC ACGTGAGATT TGCAAGAATT
481 CAAGCGAGCA TTAAGAAATT ATATACTCGA ATTGATGGAA ATTCGAGTAC GATAAATTTA
541 ACTGATTGGT TAGAAGAATT GAATTTTGGT CTGATCGTGA AGATGATCGC TGGAAAAAAT
601 TATGAATCCG GTAAAGGAGA TGAACAAGTG GAGAGATTTA AGAAGCGGTT TAAGGATTTT
661 ATGATTTTAT CAATGGAGTT TGTGTTATGG GATGCATTTC CAATTCCATT ATTTAAATGG
721 GTGGATTTTC AAGGGCATGT TAAGGCTATG AAAAGGACTT TTAAGATAT AGATTCTGTT
781 TTTCAGAATT GGTAGGGGA ACATATTAAT AAAAGAGAAA AAATGGAGGT TAATGCAGAA
841 GGGAAATGAAC AAGATTTTCAT TGATGTGGTG CTTTCAAAA TGAGTAATGA ATATCTTGGT
901 GAAGGTTACT CTCGTGATAC TGTCATTAAG GCAACGGTGT TTAGTTTGGT CTTGGATGCA
961 GCAGACACAG TTGCTCTTCA CATAAATTGG GGAATGGCAT TATTGATAAA CAATCAAAAG
1021 GCCTTGACGA AAGCACAAGA AGAGATAGAC ACAAAGTTG GTAAGGACAG ATGGGTAGAA
1081 GAGAGTGATA TTAAGGATT TGTATACCTC CAAGCTATTG TTAAGAAAGT GTTACGATTA
1141 TATCCACCAG GACCTTTGTT AGTACCACAC GAAAATGTAG AAGATTGTGT TGTAGTGGGA
1201 TATCACATTC CTAAAGGGAC AAGATTATTC GCAAACGTCA TGAAACTGCT ACGTGATCCT
1261 AAACCTCTGGC CTGATCCTGA TACTTTCGAT CCAGAGAGAT TCATTGTCTAC TGATATTGAC
1321 TTTTCGTGGTC AGTACTATAA GTATATCCCG TTTGGTTCTG GAAGACGATC TTGTCCAGGG
1381 ATGACTTATG CATTGCAAGT GGAACACCTA ACAATGGCAC ATTTGATCCA AGGTTTCAAT
1441 TACAGAACTC CAAATGACGA GCCCTTGGAT ATGAAGGAAG GTGCAGGCAT AACTATACGT
1501 AAGGTAAATC CTGTGGAAC GATAATAGCG CCTCGCCTGG CACCTGAGCT TTATTAATAAC
1561 CTAAGATCTT TCATCTTGGT TGATCATTGT ATAATACTCC TAAATGGATA TTCATTTACC
1621 TTTTATCAAT TAA

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SEQ. ID. NO. 180

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1 MLSPIEAIVG LVTFTLEFFF LWTKKSQKPS KPLPPKIPGG WPVIGHLFHF NDDGDDRPLA
61 RKLGLDADKY GPVFTFRLGL PLVLVVSSYE AVKDCFSTND AIFSNRPAFL YGDYLGYNNA
121 MLFLANYGYP WRKNRKLVIQ EVLSASRLEK FKHVRFARIQ ASIKNLYTRI DGNSSSTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFKKAFKDFM ILSMEFVLWD AFPPIPLFKWV
241 DFQGHVKAMK RTFKDIDSVF QNWLGEHINK REKMEVNAEG NEQDFIDVVL SKMSNEYLGE
301 GYSRDTVIIKA TVFSVLVDAA DTVALHINWG MALLINNQKA LTKAQEEIDT KVGKDRWVEE
361 SDIKDLVYLQ AIVKEVLRLY PPGPLLVPHE NVEDCVVSGY HIPKGTRLF A NVMKLLRDPK
421 LWPDPDTFDP ERFIATDIDF RGQYKYIPF GSGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 RTPNDEPLDM KEGAGITIRK VNPVELIAP RLAPELY

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FIG. 91

NAME D121-AA8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 181

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1 AATCCATAAT GCTTCTCTCC ATAGAAGCCA TTGTAGGACT AGTAACCTTC ACATTTCTCT
61 TCTTCTTCCT ATGGACAAAA AAATCTCAAA AACCTTCAAA ACCCTTACCA CCGAAAAATCC
121 CCGGAGGATG GCCGGTAATC GGCCATCTTT TCCACTTCAA TGACGACGGC GACGACCGTC
181 CATTAGCTCG AAAACTCGGA GACTTAGCTG ACAAATACGG CCCCCTTTTC ACTTTTCGGC
241 TAGGCCTTCC CCTTGTCTTA GTTGTAAAGCA GTTACGAAGC TGTAAGAGAC TGTTTCTCTA
301 CAAATGACGC CATTTTTTCC AATCGTCCAG CTTTTCTTTA CGGCGATTAC CTTGGCTACA
361 ATAATGCCAT GCTATTTTTG GCCAATTACG GACCTTACTG GCGAAAAAAT CGAAATTAG
421 TTATTCAGGA AGTTCTCTCC GCTAGTCGTC TCGAAAAAAT CAAACACGTG AGATTGCAA
481 GAATTCAGC GAGCATTAAG AATTTATATA CTCGAATTGA TGGAAATTCG AGTACGATAA
541 ATTTAACTGA TTGGTTAGAA GAATTGAATT TTGGTCTGAT CGTGAAGATG ATCGCTGGAA
601 AAAATTATGA ATCCGGTAAA GGAGATGAAC AAGTGGAGAG ATTTAAGAAA GCGTTTAAAG
661 ATTTTATGAT TTTATCAATG GAGTTTGTGT TATGGGATGC ATTTCCAATT CCATTATTTA
721 AATGGGTGGA TTTTCAAGGG CATGTTAAGG CTATGAAAAA GACTTTTAAA GATATAGATT
781 CTGTTTTTCA GAATTGGTTA GAGGAACATA TTAATAAAG AGAAAAATG GAGGTTAATG
841 CAGAAGGGAA TGAACAAGAT TTCATTGATG TGGTGCTTTC AAAAATGAGT AATGAATATC
901 TTGGTGAAGG TTAATCTCGT GATACTGTCA TTAAAGCAAC GGTGTTTAA GTGGTCTTGG
961 ATGCAGCAGA CACAGTTGCT CTTACATAA ATTGGGGAAT GGCATTATTG ATAAACAATC
1021 AAAAGGCCTT GACGAAAGCA CAAGAAGAGA TAGACACAAA AGTTGGTAA GACAGATGGG
1081 TAGAAGAGAG TGATATTAAG GATTTGGTAT ACCTCCAAGC TATTGTTAAA GAAGTGTAC
1141 GATTATATCC ACCAGGACCT TTGTTAGTAC CACACGAAAA TGTAAGAAGT TGTGTTGTTA
1201 GTGGATATCA CATTCTTAAA GGGACAAGAT TATTCGCAAA CGTCATGAAA CTGCAACGTG
1261 ATCTTAACT CTGGTCTGAT CCTGATACT TCGATCCAGA GAGATTCATT GCTACTGATA
1321 TTGACTTTTC TGGTCAGTAC TATAAGTATA TCCCGTTTGG TTCTGGAAGA CGATCTTGTG
1381 CAGGGATGAC TTATGCATTG CAAGTGAAC ACTTAACAAT GGCACATTG ATCCAAGGTT
1441 TCAATTACAG AACTCCAAT GACGAGCCCT TGGATATGAA GGAAGGTGCA GGCATAACTA
1501 TACGTAAGGT AAATCCTGTG GAAGTGTATA TAGCGCCTCG CCTGGCACCT GAGCTTTATT
1561 AAAACCTAAG ATCATCTTGC TTGAT

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SEQ. ID. NO. 182

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1 MSLPIEAIVG LVTFTFLFFF LWTKKSQKPS KPLPPKIPGG WPVIGHLFHF NDDGDDRPLA
61 RKLGLADKY GPVFTFRLGL PLVLVSSYE AVKDCFSTND AIFSNRPAFL YGDYLYGNNA
121 MLFLANYGPY WRKNRKLVIQ EVLSASRLEK FKHVRFARIQ ASIKNLYTRI DGNSSSTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFKKAFKDFM ILSMEFVLWD AFPPIPLFKWV
241 DFQGHVKAMK RTFKDIDSVE QNWLEEHINK REKMEVNAEG NEQDFIDVVL SKMSNEYLGE
301 GYSRDTVICA TVFSLVLDA DTVALHINWG MALLINNKA LTKAQEEIDT KVGKDRWVEE
361 SDIKDLVYLQ AIVKEVLRLY PPGPLLVPHE NVEDCVVSGY HIPKGTRLF NVMKLQRDPK
421 LWSDPDTFDP ERFIATDIDF RGQYYKYIPF GSGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 RTPNDEPLDM KEGAGITIRK VNPVELIAP RLAPELY

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FIG. 92

NAME D122-AF10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 183

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1 CTAAACTCC ATAATGGTTT CTCCCGTAGA AGCCATTGTA GGACTAGTAA CCCTTACACT
61 TCTCTTCTAC TTCCTATGGC CCAAAAAATT TCAAATACCT TCAAAACCAT TACCACCGAA
121 AATTCCCGGA GGGTGGCCGG TAATCGGCCA TCTTTTCTAC TTCCGATGATG ACGGCGACGA
181 CCGTCCATTA GCTCGAAAC TCGGAGACTT AGCTGACAAA TACGGCCCCG TTTTCACTTT
241 CCGGCTAGGC CTTCCGCTTG TGTAAATTGT AAGCAGTTAC GAAGCTGTAA AAGACTGCTT
301 CTCTACAAAT GACGCCATT TCTCCAATCG TCCAGCTTTT CTTTACGGTG AATACCTTGG
361 CTACAATAAT GCCATGCTAT TTTTGACAAA ATACGGACCT TATTGGCGAA AAAATAGAAA
421 ATTAGTCATT CAGGAAGTTC TCTCTGCTAG TCGTCTCGAA AAATGAAGC ACGTGAGATT
481 TGGTAAATTT CAAACGAGCA TTAAGAGTTT ATACACTCGA ATTGATGGAA ATTCGAGTAC
541 GATAAATCTA ACTGATTGGT TAGAAGAATT GAATTTTGGT CTGATCGTGA AAATGATCGC
601 TGGGAAAAAT TATGAATCCG GTAAAGGAGA TGAACAAGTG GAGAGATTTA GGAAGACGTA
661 TAAGGATTTT ATAATTTTAT CAATGGAGTT TGTGTTATGG GATGCTTTTC CAATTCATT
721 GTTCAAATGG GTGGATTTTC AAGGCTATGT TAAGGCCATG AAAAGGACAT TTAAGGATAT
781 AGATTCTGTT TTTTCAAGAT GGTAGAGGA ACATGTCAAG AAAAGAGAAA AAATGGAGGT
841 TAATGCACAA GGGAAATGAAC AAGATTTCAT TGATGTGGTG CTTTCAAAA TGAGTAATGA
901 ATATCTTGAT GAAGGTTACT CTCGTGATAC TGTCAATAAA GCAACAGTGT TTAGTTTGGT
961 CTTGGATGCT GCGGACACAG TTGCTCTTCA CATGAATTGG GGAATGGCAT TACTGATAAA
1021 CAATCAACAT GCCTTGAAGA AAGCACAAGA AGAGATCGAT AAGAAAGTTG GTAAGGAAAG
1081 ATGGGTAGAA GAGAGTGATA TTAAGGATT TGTCTACCTC CAAGCTATTG TTAAGAAAGT
1141 GTTACGATTA TATCCACCAG GACCTTTATT AGTACCTCAT GAAAATGTAG AGGATTGTGT
1201 TGTAGTGGG TATCACATTC CTAAAGGGAC TAGACTATTC GCGAACGTTA TGAATTGCA
1261 GCGCGATCCT AAACCTCTGGT CAAATCCTGA TAAGTTTGAT CCAGAGAGAT TCTTCGCTGA
1321 TGATATTGAC TACCGTGGTC AGCACTATGA GTTTATCCCA TTTGGTTCTG GAAGACGATC
1381 TTGTCCGGGG ATGACTTATG CATTACAAGT GGAACACCTA ACAATAGCAC ATTTGATCCA
1441 GGGTTTCAAT TACAAAACTC CAAATGACGA GCCCTTGGAT ATGAAGGAAG GTGCAGGATT
1501 AACTATACCT AAAGTAAATC CTGTAGAAGT GACAATTACG GCTCGCCTGG CACCTGAGCT
1561 TTATTAAAC CTTAGATGTT TTATCTTGAT TGTACTAATA TATATATGCA GAAAAAATTG

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SEQ. ID. NO. 184

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1 MVSPVEAIVG LVTLLLFYF LWPKKFQIPS KPLPPKIPGG WPFVIGHLYF DDDGDDRPLA
61 RKLGLADKY GPVFTFRLGL PLVLIVSSYE AVKDCFSTND AIFSNNRPAFL YGEYLGYNNA
121 MLFLTKEYGY WRKNRKLVIQ EVLSASRLEK LKHVRFGKIQ TSIKSLYTRI DGNSSSTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFRKAYKDFI ILSMEFVLWD AFPIPLFKWV
241 DFQGYVKAMK RTFKDIDSVF QNWLEEHVKK REKMEVNAQG NEQDFIDVVL SKMSNEYLDE
301 GYSRDTVICA TVFSLVLDAE DTVALHMNWG MALLINNQHA LKKAQEEDIK KVGKERWVEE
361 SDIKDLVYLQ AIVKEVLRLY PPGPLLVPHE NVEDCVVSGY HIPKGRRLFA NVMKLQRDPK
421 LWSNPDKFDI ERFADDIDY RGQHYEFIPF GSGRRSCPGM TYALQVEHLT IAHLIQGFNY
481 KTPNDEPLDM KEGAGLTIRK VNPVEVTITA RLAPELY

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FIG. 93

NAME D128-AB7
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 185

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1 CGAGGGCTCCC CACCAAAAAA TCATTCTCT CTCTAAAAAT GGATCTTCTC TTACTAGAGA
61 AGACCTTAAT TGGCTTTTC TTTGCCATTT TAATCGCTTT AATTGCTCTT AAACCTCGTT
121 CAAAGCGTTT TAAGCTTCC TCCAGGACCA TTCCAGTACC AGTTTTTGGT AATTGGCTTC
181 AAGTTGCTGA TGATTAAAC CACAGAAATC TTAAGTATTA TGCCAAAAAA TTTGGCGATC
241 TTTTCTTGTT AAGAATGGGT CAACGTAAC TAGTTGTTGT GTCATCTCCT GAATTAGCTA
301 AAGAAGTTTT ACACACACAA GGTGTTGAAT TTGGTTCAAG AACAGAAAT GTTGTGTTTG
361 ATATTTTAC TGGAAAAGGT CAAGATATGG TTTTACTGT ATATGGTGAA CATTGGAGAA
421 AAATGAGGAG AATTATGACT GTACCATTTT TTAATAATA AGTTGTGCAA CAGTATAGAG
481 GGGGGTGGGA GTTTGAGGTG GCAAGTGTA TTAGGATGT GAAAAAAAT CCTGAATCTG
541 CTACTAATGG GATCGTATTA AGGAGGAGAT TACAATTAAT GATGTATAAT AATATGTTTA
601 GGATTATGTT TGATAGGAGA TTTGAGAGTG AAGATGATCC TTTGTTTGT AAGCTTAAGG
661 CTTTGAATGG TGAAAGGAGT AGATTGGCTC AAAGTTTGA GTATAATTAT GGTGATTTTA
721 TTCCAATTTT GAGGCTTTT TTAGAGAGTT ATTTGAAGAT CTGTAAAGAA GTTAAGGAGA
781 AGAGGCTGCA GCTTTTCAA GATTACTTTG TTGATGAAAG AAAGAAGCTT TCAAATACCA
841 AGAGCTCGGA CAGCAATGCC CTAAGATGTG CGATTGATCA CATTCTTGAG GCTCAACAGA
901 AGGAGAGAT CAATGAGGAC AACGTTCTTT ACATTGTTGA AAACATCAAT GTTGTGCAA
961 TTGAACAAC ATTATGGTCA ATTGAGTGGG GTATCGCCGA GCTAGTCAAC CACCCTCACA
1021 TCCAAAAGAA ACTGCGCGAC GAGATTGACA CAGTCTCTGG ACCAGGAGTG CAAGTGACTG
1081 AACCAGACAC CCACAAGCTT CCATACCTTC AGGCTGTGAT CAAGGAGGCA CTTGCTCTCC
1141 GTATGGCAAT TCCTCTATTA GTCCACACA TGAACCTTCA CGACGCAAAG CTTGGCGGGT
1201 TTGATATTCC AGCAGAGAGC AAAATCTTGG TTAACGCTTG GTGGTTAGCT AACACCCGG
1261 CTCATTGGAA GAAACCCGAA GAGTTCAGAC CCGAGAGGTT CTTTGAAGAG GAGAAGCATG
1321 TTGAGGCCAA TGGCAATGAC TTCAGATATC TTCCGTTTGG CGTTGGTAGG AGGAGCTGCC
1381 CTGGAATTAT ACTTGCAATTG CCAATCTTG GCATCACTTT GGGACGTTTG GTTCAGAACT
1441 TTGAGCTGTT GCCTCCTCCA GGCCAGTCGA AGCTCGACAC CACAGAGAAA GGTGGACAGT
1501 TCACTCTCCA CATTTTGAAG CATTCCACCA TTGTGTTGAA ACCAAGGTCT TTCTGAACTT
1561 TGTGATCTTA TTAATTAAGG GGTCTGAAG AAATTTGATA GTGTTGGATA TTAAGGCGCA
1621 ATT

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SEQ. ID. NO. 186

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1 MDLLLLLEKTL IGLFFAILIA LIVSKLRSKR FKLPPGPPIPV PVFGNWLQVG DDLNHRNLTD
61 YAKKFGDLFL LRMGQRNLV VSSPELAKEV LHTQGVFSGS RTRNVVDFIF TGKGQDMVFT
121 VYGEHWRKMR RIMTVPFFTN KVVQQYRGGW EFEVASVIED VKKNPESATN GIVLRRRLQL
181 MMYNNMFRIM FDRRFESEDD PLFVKLKALN GERSRLAQSF EYNYGDFIPI LRPFLRGYLK
241 ICEVKEKRL QLFKDYFVDE RKKLSNTKSS DSNALKCAID HILEAQKQGE INEDNVLYIV
301 ENINVAAIET TLWSIEWGIA ELVNHPHIQK KLRDEIDTVL GPGVQVTEPD THKLPLYLQAV
361 IKEALRLRMA IPLLVPHMNL HDAKLGGFDI PAESKILVNA WWLANNPAHW KKPEEFRPER
421 FFEKEKHVEA NGNDFRYLPF GVGRRSCPFI ILALPILGIT LGRLVQNFE LPPPGQSKLD
481 TTEKGGQFSL HILKHSTIVL KPRSF

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FIG. 94

NAME D129-AD10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 187

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1 CAACACGCTT ACTATCTCCT AAATCTCCAC TCAAAAACAA AGAAGAGAAA GATTTAA AAC
61 TAATAATTAT GAAAGAGATG GTGCAAAACA ATATGAGCAC TTCTCTTCTT GAAACTTTAC
121 AAGCTACGCC CATGATATTC TACTTCATCG TCCCTCTCTT CTGCTTATTC CTTCTCTCCA
181 AATCTCGCCG TAAACGTTTG CCTCCAGGTC CAACTGGGTG GCCTCTCAAT GGTAAACATGA
241 TGATGATGGA CCAGTTAACT CACCGTGCC TTGCCAACT AGCCCAAAA TATGGTGGTG
301 TTTTTCACCT TAAAATGGGT TATGTTTACA AAATGTAGT CTCTGGTCCA GACGAAGCTC
361 GCCAAGTATT ACAGGAACAC GACATCATAT TTTGCAACCG TCCAGCGACC GTAGCCATAA
421 GTTACCTAAC ATATGACAGG GCAGACATGG CTTTGTCTGA CTATGGACTC TTCTGGCGGC
481 AGATGAGAAA ACTATGTGTA ATGAAACTCT TCAGCCGCAA ACGAGCTGAG TCATGGGACT
541 CAGTTCGAGA CGAAGCGGAT TCCATGGTTA GAATGTAAAC AACCAACACA GGCACAGCTG
601 TTAACCTAGG TGAACCTTGT TTCAGTCTCA CTCGTAATAT TATCTACAGA GCTGCTTTTG
661 GAACCTGTTC TGAAGATGGA CAAGGCGAGT TCATTGAAAT TATGCAAGAG TTTTCGAAGC
721 TATTTGGCGC TTTCAATATA GCTGATTTTA TTCCATGGCT AGGGTGGGTT GGTAAAGCAGA
781 GTCTAAATAT TAGACTTGCT AAGGCTAGAG CGTCGCTTGA TGGGTTCAAT GATTCGATTA
841 TTGATGACCA TATTATTAGA AAGAAAGCTT ATGTTAATGG CAAAATGAT GGAGGTGATC
901 GAGAACTGA TATGGTGGAT GAGCTTTAG CTTTTTACAG TGAGGAAGCA AAAGTAACTG
961 AGTCCGAAGA TTTGCAGAA TCTATCAGAC TTAATAAGGA TAGTATCAAA GCTATCATCA
1021 TGGATGTAAT GTTTGGAGGG ACAGAAACAG TGGCTTCTGC AATAGAATGG GCCATGGCAG
1081 AGCTTATGAG GAGTCTGAA GATCTTAAAA AAGTACAACA AGGGCTGGCT AACGTTGTTG
1141 GACTCAACAG AAAAGTTGAA GAATCTGACT TTGAAAAATT AACATACTTA AGATGTTGTC
1201 TAAAGAAAC TCTACGACTT CACCCTCCAA TCCCTCTCCT CCTCCATGAG ACCGCCGAGG
1261 AATCCACCGT CTCCGGCTAC CATATTCCGG CAAAGTCACA TGTATTATA AATTCAATTTG
1321 CCATTGGGCG TGACAAAAAT TCATGGGAAG ATCCTGAAAC TTATAAACCA TCTAGGTTTC
1381 TCAAAGAAGG TGTACCAGAT TTAAAGGAG GTAATTTTGA GTTTATACCA TTTGGGTCGG
1441 GTCGGCGGTC TTGCCCCGGT ATGCAACTTG GGCTTTATGC ATTGGAATG GCTGTGGCCC
1501 ATCTTCTTCA TTGTTTACT TGGGAATTGC CAGATGGTAT GAAACCAAGT GAGCTTAAAA
1561 TGGATGATAT TTTTGGACTC ACTGCTCAA GAGCTAATCG ACTCGTGGCT GTGCCCTACTC
1621 CACGCTTGT GTGTCCCTT TATTAATTGA AGAAAAAGG TGGGGCT

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SEQ. ID. NO. 188

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1 MKEMVQNMS TSLLLETQAT PMIFYFIVPL FCLFLLSKSR RKRLPPGPTG WPLIGNMMMM
61 DQLTHRLAK LAQKYGGVFH LKMGYVHKIV VSGPDEARQV LQEHDIIFSN RPATVAISYL
121 TYDRADMAFA DYGLFWRQMR KLCVMKLF SR KRAESWDSVR DEADSMVRIV TTNTGTAVNL
181 GELVFSLTRN IYRAAFGTC SEDGQGEFIE IMQEF SKLFG AFNIADFI PW LGWVGKQSLN
241 IRLAKARASL DGFIDSIDD HIIRKKAYVN GKNDDGGDRET DMVDELLAFY SEEAKVTESE
301 DLQNAIRLTK DSIKAIIMDV MFGGTETVAS AIEWAMAE LM RSPEDLKKVQ QGLANVVGLN
361 RKVEESDFEK LTYLRCLLKE TLR LHPP I PL LLHETAEST VSGYHIPAKS HVIINSFAIG
421 RDKNSWEDPE TYKPSRFLKE GVPDFKGGNF EFIPFGSGRR SCPGMQLGLY ALEMVAHLL
481 HCFTWELPDG MKPSELKMD D IFGLTAPRAN RLVAVPTPRL LCPLY

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FIG. 95

NAME D135-AE1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 189

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1 GGGGGATAAG AATATGGAGA TACCATATTA CAGCTTAAAA CTTACAATTT TTTCAATTTC
61 AATTATCTTT GTACTAAGAT GGGCATGGAA AATCTTGAAT TATGTGTGGT TAAACCAAAA
121 AGAATTGGAG AAATGCATCA GACAGCAGGG TTTCAAAGGA AACTCTTACA AATTCTTGTT
181 TGGGGATATG AAAGAGATAA AGAAAATGGG TGAAGAAGCT ATGTCTAAGC CAATCAATTT
241 CTCTCATGAC ATGATTTGGC CTAGAGTCAT GCCCTTCATC CACAAAACCA TCACCAATTA
301 TGGTAAGAAT TGTTTTGTGT GGTTTGGGCC AAGACCAGCA GTCCTGATCA CAGACCCGGA
361 ACTTGTAAAG GAGGTGCTAA CGAAGAATTT CGTTATCAG AAGCCACCTG GCCTCCACT
421 CACAAAATTG GCAGCAACTG GAATTGCAGG CTATGAAACA GATAAATGGG CTACACATAG
481 AAGGCTTCTC AATCTGCTT TTCACCTGA CAAGTTGAAG CATATGCTAC CTGCATTCCA
541 ATTTACTGCT TGTGAGATGT TGAGCAAATT GGAGAAAGTT GTCTCACCAA ATGGAACAGA
601 GATAGATGTG TGGCCATATC TACAACTTT AACAAGTGAT GCCATTTCOA GAATGCTTT
661 TGGCAGTAGT TATGAAGAAG GAAGAAAGCT TTTTGAAGTT CAAAAGGAAC AACTTTCACT
721 AATTCTAGAA GTGTCGCCGA CAATATACAT CCCAGGATGG AGGTTTTTGC CAACAAAAAG
781 GAACAAAAGG ATGAAGCAAA TATTTAATGA AGTACGAGCG CTGGTATTGG GAATTATTAA
841 GAAAAGATTG AGTATGATTG AAAATGGAGA AGCTCCTGAT GATTATTGGG GTATATTATT
901 GGCATCCAAT TTAAGAGAAA TCCAACAACA TGGAAATAAC AAGAAATTTG GTATGAGTAT
961 TGATGAGGTG ATTTGAAGAG GTAAACTCTT CTATTTTGGC GGGCAAGAGA CAACTTCATC
1021 TTTACTTGTA TGGACTATGA TTTTGTGTGT CAAACATCCT AGTTGGCAAG ATAAAGCTAG
1081 AGAAGAGGTT TTGCAAGTGT TTGGAAGTAG GGAAGTTGAC TATGACAAAT TGAATCAGCT
1141 AAAAATAGTA ACTATGATCT TAAACGAGGT CTTAAGGTTG TATCCAGCAG GATATGCGAT
1201 TAATCGAATG GTAACCAAG AAACAAAGTT AGGGAATTTA TGTTTACCAG CTGGGGTACA
1261 ACTCTTGTTA CCAACAATTT TGTTCGAACA TGATACTGAA ATATGGGGAG ATGATGCAAT
1321 GGAGTTCAAT CCAGAGAGAT TTAGTGATGG AATATCCAAA GCAACAAAAG GAAAACCTGT
1381 GTTCTTTCCA TTTAGTTGGG GTCCAAGAAT ATGTATTGGG CAAAATTTTG CTATGTTAGA
1441 GGCCAAGATG GCAATGGCTA TGATTCTGAA AACTATGCA TTTGAAGTCT CTCCATCTTA
1501 TGCTCATGCT CCTCATCCAC TACTACTTCA ACCTCAATAT GGTGCTCAAT TAATTTTGTA
1561 CAAGTTGTAG AAATGGTCAA TTTGGAAGTT GTTATGGAAC TTTTATCATC GTAATCAACC

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SEQ. ID. NO. 190

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1 MEIPYYSKLK TIFSFAIIFV LRWAWKILNY VWLKPKELEK CIRQQGFKGN SYKFLFGDMK
61 EIKKMGEEM SKPINFSHDM IWPRVMPFIH KITITNYGKNC FVWFGPRPAV LITDPELVKE
121 VLTKNFVYQK PPGTPLTKLA ATGIAGYETD KWATHRRLLN PAFHLDKLKH MLPAFQFTAC
181 EMLSKLEKVV SPNGTEIDVW PYLQTLTSDA ISRTAFGSSY EGRKLFELQ KEQLSLILEV
241 SRTIYIPGWR FLPTKRNRKM KQIFNEVRAL VLGIKKRLS MIENGEAPDD LLGILLASNL
301 KEIQQHGNK KFGMSIDEVI EECKLFYFAG QETTSSLLVW TMILCKHPS WQDKAREEVL
361 QVFGSREVDY DKLNLQKIVT MILNEVLRLY PAGYAINRMV TKETKLGNLG LPAGVQLLLP
421 TILLQHDTEI WGDDAMEFNP ERFSDGSKA TKGKLVFFPF SWGPRICIGQ NFAMLEAKMA
481 MAMILKNYAF ELSPSYAHAP HPLLLQPYG AQLILYKL

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FIG. 96

NAME D141-AD7
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 191

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1  GTCCTAACTA AAAATGGAGA TTCAGTTTTC TAACTTAGTT GCATTCTTGC TCTTTCTCTC
61 CAGCATCTTT CTTCTATTCA AAAAATGGAA AACCGAAAAA CTAATTTTGC CTCCTGGTCC
121 ATGGAAATTA CCTTTTATTG GAAGTTTACA CCATTGGGCT GTGGCAGGTC CACTTCCTCA
181 CCATGGGCTA AAAAATTTAG CCAAACGCTA TGGTCCTCTT ATGCATTTAC AACTTGGACA
241 AATTCCTACA CTCATCATAT CATCACCTCA AATGGCAAAA GAAGTACTAA AAACCTCACGA
301 CCTCGCTTTT GCCACTAGAC CAAAGCTTGT CGTGGCCGAC ATCATTCACT ACGACAGCAC
361 GGACATAGCA TTTTCTCCGT ACGGTGAAAT CTGGAGACAA ATTCGTAATA TTTGCATATT
421 GGAACCTCTG AGTGCCAAGA TGGTCAAATT TTTAGCTCG ATTCGCCAAG ATGAGCTCTC
481 GAAGATGCTC TCATCTATAC GAACGACACC CAATCTTACA GTCAATCTTA CTGACAAAAA
541 TTTTGGTGTG ACGAGTTCGG TAACTTGTAG ATCAGCTTTA GGAAGATAT GTGGTGACCA
601 AGACAAATTG ATCATTTTTA TGAGGGAAAT AATATCATTG GCAGGTGGAT TTAGTATTGC
661 TGATTTTTCCT CCTACATGGA AAATGATTCA TGATATTGAT GGTTTCGAAAT CTAAACTGGT
721 GAAAGCACAT CGTAAGATTG ATGAAATTTT GGGAAATGTT GTTGATGAGC ACAAAAAGAA
781 CAGAGCAGAT GGCAGAAGG GTAATGGTGA ATTTGGTGGT GAAGATTTGA TTGATGTATT
841 GTTAAGAGTT AGAGAAAGTG GAGAAGTTCA AATTCCTATC ACAAATGACA ATATCAAATC
901 AATATTAATC GACATGTTCT CTGCGGGATC TGAACATCA TCGACGACTA TAATTTGGGC
961 ATTAGCTGAA ATGATGAAGA AACCAAGTGT TTTAGCAAAG GCACAAGCTG AAGTAAGGCA
1021 AGCTTTGAAG GAGAAAAAAG GTTTTCAACA GATTGATCTT GATGAGCTAA AATATCTCAA
1081 GTTAGTAATC AAAGAAACCT TAAGAAATGCA CCCTCCAATT CCTCTATTAG TTCCTAGAGA
1141 ATGTATGGAG GATACAAAGA TTGATGGTTA CAATATACCT TTCAAACAA GAGTCATAGT
1201 TAATGCATGG GCAATCGGAC GAGATCCAGA AAGTTGGGAT GACCCCGAAA GCTTTTATGCC
1261 AGAGAGATTT GAGAATAGTT CTATTGACTT TCTTGAAAT CATCATCAGT TTATAACCATT
1321 TGGTGCAGGA AGAAGGATTG GTCCGGGAAT GCTATTTGGT TTAGCTAATG TTGGACAACC
1381 TTTAGCTCAG TTACTTTTATC ACTTCGATTG GAAACTCCCT AATGGACAAA GTCATGAGAA
1441 TTTTCGACAT ACTGAGTCAC CTGGAATTTT TGCTACAAGA AAGGATGATC TTGTTTGTAT
1501 TGCCACTCCT TATGATTCTT ATTAAGCAGT AGCAGAAATA AAAAGCCGGG GCAACACAGAA
1561 AAAAGT

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SEQ. ID. NO. 192

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1  MEIQFSNLVA FLLFLSSIFL LFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKRYGPI M HLQLGQIPTL IISSPQMAKE VLKTHDLAFA TRPKLVVADI IHYDSTDIAF
121 SPYGEYWRQI RKICILELLS AKMVKEFFSI RQDELSKMLS SIRTTPNLT V NLTDKIFWFT
181 SSVTCRSALG KICGDQDKLI IFMREIISLA GGFSAIDFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILGNVV DEHKKNRADG KKGNGEFGGE DLIDVLLVRV ESGEVQIPIT NDNIKSILID
301 MFSAGSETSS TTIIWALAEM MKKPSVLAKA QAEVRQALKE KKGFFQIDLD ELKYLKLVIK
361 ETLRMHPPPI LLVPRECMED TKIDGYNIPF KTRVIVNAWA IGRDPESWDD PESFMPERFE
421 NSSIDFLGNH HQFIPFGAGR RICPGMLFGL ANVGQPLAQL LYHFDWKLPN GQSHENFDMT
481 ESPGISATRK DDLVLIATPY DSY

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FIG. 97

NAME D147-AD3
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 193

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1  CAACTAACAA ACACATTGAG TCCTCTCCCA AATCACTGAT TCACCACCAA AAGTACCAAC
61 AATTCAATGG AAGGTACAAA CTTGACTACA TATGCAGCAG TATTTCTTGA TACTCTGTTT
121 CTTTTGTTCC TTTCCAAACT TCTTCGCCAG AGGAAACTCA ATTTACCTCC AGGCCCAAAA
181 CCATGGCCGA TCATCGGAAA CTTAAACCTT ATTGGCAATC TTCTCATCG CTCATCCAC
241 GAACTCTCCC TCAAGTACGG ACCCGTTATG CAACTCCAAT TCGGGTCTTT CCCCGTTGTA
301 GTTGGATCCT CCGTCGAAAT GGCTAAGATT TTCCTCAAAT CCATGGATAT TAACTTTGTA
361 GGCAGGCCCTA AAACGGCTGC CGGAAAATAC ACAACGTACA ATTATTCCGA TATTACATGG
421 TCTCCTTACG GACCATATTG GCGCCAGGCA CGTAGGATGT GCCTAACGGA ATTATTGAGC
481 ACGAAACGTC TCGATTCATA CGAGTATATT CGGGCTGAGG AGTTGCATTC TCTTCTCCAT
541 AATTTGAACA AAATATCAGG GAAACCAATT GTGTTGAAAG ATTATTCGAC GACGTTGAGT
601 TTAATGTGTA TTAGCAGGAT GGTACTGGGG AAAAGGTATT TGGACGAATC AAATGGTGTA
661 TTCGTGAATC CTGAGGAATT TAAGAAGATG TTGGACGAAT TGTTTTGTCT AAATGGTGTA
721 CTTAATATTG GAGATTCAAT TCCATGGATT GATTTTCATG ATTTGCAAGG TTATGTTAAG
781 AGGATGAAAG TAGTGAGCAA GAAATTCGAC AAGTTTTTAG AGCATGTTAT TGATGAGCAT
841 AACATTAGGA GAAATGGAGT GGAGAATTAT GTTGCTAAGG ATATGGTGGA TGTTTTGTG
901 CAGCTCGCTG ATGATCCGAA GTTGGAAAGT AAGCTGGAGA GACATGGAGT CAAAGCATTTC
961 ACTCAGGATA TGCTGGCTGG TGGAAACCGAG AGTTCAGCAG TGACAGTGGA GTGGGCAATT
1021 TCAGAGCTGC TAAAGAAGCC GGAGATTTTC AAAAAGGCTA CAGAAGAATT GGATCGAGTA
1081 ATTGGGCAGA ATAGATGGGT ACAAGAAAAG GACATTCCAA ATCTTCTCTA CATAGAGGCA
1141 ATAGTCAAAG AGACTATGCG ACTGCACCCC GTGGCACCAG TGTGGTGCC ACGTGAGTGT
1201 CGAGAAGATA TTAAGGTAGC AGGCTACGAC GTTCAGAAAG GAACTAGGGT TCTCGTGAGT
1261 GTATGGACTA TTGGAAGAGA CCCTACATTG TGGGACGAGC CTGAGGTGTT CAAGCCGGAG
1321 AGATTCCATG AAAGGTCCAT AGATGTTAAA GGACATGATT ATGAGCTTTT GCCATTGGA
1381 GCGGGGAGAA GAATGTGCCC GGGTTATAGC TTGGGGCTCA AGGTGATTCA AGCTAGCTTA
1441 GCTAATCTTC TACATGGATT TAACTGGTCA TTGCCTGATA ATATGACTCC TGAGGACCTC
1501 AACATGGATG AGATTTTGG GCTCTCTACA CCTAAAAAT TTCCACTTGC TACTGTGATT
1561 GAGCCAAGAC TTTCACCAA ACTTTACTCT GTTTGATTCA GCAGTTCTAT GGTTCGGTCA
1621 AGATAGACTT TGTTACGTTT GAACCTGTGC TC

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SEQ. ID. NO. 194

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1  MEGTNLTYYA AVFLDTLFLF FLSKLLRQRK LNLPPGPKPW PIIGNLNLIG NLPHRSIHEL
61 SLKYGPVMQL QFGSFPVVVG SSVEMAKIFL KSMDFNFVGR PKTAAGKYTT YNYSBITWSP
121 YGPYWRQARR MCLTELFSTK RLDSYHEYIRA EELHSLHLNL NKISGKPIVL KDYSTTLTSLN
181 VISRMVLGKR YLDESENSEFV NPPEEFKMLD ELFLNLGVNL IGDSPWIDF MDLQGYVKRM
241 KVVSKKFDKF LEHVIDEHNI RRNGVENYVA KDMVDVLLQL ADDPKLEVKL ERHGVKAFTV
301 DMLAGGTESS AVTVEWAISE LLKKPEIFKK ATEELDRVIG QNRWVQEKDI PNLPIYIEAIV
361 KETMRLHPVA PMLVPRECRE DIKVAGYDVQ KGTRVLVSVW TIGRDTLWD EPEVFKPERF
421 HERSIDVKGH DYELLPFGAG RRMCPGYSLG LKVIQASLAN LLHGFNWSLP DNMTPEDLNM
481 DEIFGLSTPK KFPLATVIEP RLSPKLYSV

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FIG. 98

NAME D163-AF12
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 195

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1 CTTCTTCCCTT CCTAACTAAA AATGGAGATT CAGTTTCTA ACTTAGTTGC ATTCTTGCTC
61 TTTCTCTCCA GCATCTTCT TGTATTCAAA AAATGGAAAA CCAGAAAAC AAATTTGCCT
121 CTGGTCCAT GGAATTACC TTTTATTGGA AGTTTACACC ATTTGGCTGT GGCAGGTCCA
181 CTTCTCACC ATGGCCTAAA AAATTTAGCC AAACGCTATG GTCTCTTAT GCATTTACAA
241 CTTGGACAAA TTCTTACACT CGTCATATCA TCACCTCAA TGGCAAAAGA AGTACTAAAA
301 ACTCACGACC TCGCTTTTGC CACTAGACCA AAGCTTGTCG TGGCCGACAT CATTCACTAC
361 GACAGCACGG ACATAGCATT TTCGCCATAC GGTGAATACT GGAGACAAAT TCGTAAAAAT
421 TGCATATTGG AACTCTTGAG TGCCAAGATG GTCAAGTTTT TTAGCTCGAT TCGCCAAGAT
481 GAGCTCTCGA AGATGGTTTC ATCTATACGA ACGACGCCCC ATCTCCAGT CAATCTTACC
541 GACAAGATTT TTTGGTTTAC GAGTTCGGTA ATTTGTAGAT CAGCTTTAGG GAAGATATGT
601 GGTGACCAAG ACAAATTGAT CATTTTTATG AGGGAATAAA TATCATTGGC AGGTGGATTT
661 AGTATTGCTG ATTTTTTCCG TACATGGAAA ATGATTCATG ATATTGATGG TTCAAAATCT
721 AAACCTGGTG AGGCACATCC TAAGATTGAT GAAATTTTGG AAAATGTGGT AAATGAGCAC
781 AAACAGAAATC GAGCAGATGG TAAAAGGGT AATGGTGAAT TTGGTGGAGA AGATCTGATT
841 GATGTTTTGT TAAGAGTTAG AGAAAGTGA GAAGTTCAA AAGTTCATC AGATGACAAAT
901 ATCAAAATCAA TATTAATCGA CATGTTCTCT GCCGGATCGG AAACATCATC GACAACATA
961 ATTTGGGCAT TAGCTGAAAT GATGAAGAAA CCAAGTGTTT TAGCAAAGGC ACAAGCTGAA
1021 GTGAGGCAAG CTTTGAAGGG GAAGAAAATT AGTTTCAAG AGATTGATAT TGATAAGCTA
1081 AAGTATTTGA AGTTAGTGAT CAAAGAAACT TTAAGAAATG ACCCTCCAAT TCCTCTGTTA
1141 GTCCTTAGAG AATGTATGGA AGATACAAAG ATTGATGGTT ACAATATACC TTTCAAAACA
1201 AGAGTCATTG TTAATGCATG GGCAATTGGA CGAGATCCTC AAAGTTGGGA TGATCCTGAA
1261 AGCTTTACGC CAGAGAGATT TGAGAATAAT TCTATTGATT TTCTTGGAAA TCATCATCAA
1321 TTTATTCCAT TTGGTGCAGG AAGAAGGATT TGTCCTGGAA TGCTATTTGG TTTAGCTAAT
1381 GTTGACAAAC CTTTAGCTCA GTTACTTTAT CACTTCGATT GGAAACTCCC TAATGGACAA
1441 AGTCATGAGA ATTTGCAGAT GACTGAGTCA CCTGGAATTT CTGCTACAAG AAAGGATGAT
1501 CTTGTTTTGA TTGCCACTCC TTATGATTCT TATTAAGCAG TAGCAGAAAT AAAAAGCCGG
1561 GGCAACAGA AAAAAGTATT GCTGCTTCTA GGTATTTTCT ATTGGATAAA TTTCAAAAT
1621 CATCCACAAT ATTTAGTGTT TGCTAGAGTT GGTAGC

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SEQ. ID. NO. 196

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1 MEIQFSNLVA FLLFLSSIFL VFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKRYGPLM HLQLGQIPTL VISSPQMAKE VLKTHDLAFA TRPKLVVADI IHYDSTDIAF
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMVS SIRTTPNLPV NLTDKIFWFT
181 SSVICRSALG KICGDDKLI IFMREIISLA GGFSIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILENVV NEHKQNRADG KKGNGEFGGE DLIIDLVRV ESSEVQIPIT DNIKSILID
301 MFSAGSETSS TTIIWALAEM MKKPSVLAKA QAEVRQALKG KKISFQEIDI DKLKYLKLV
361 KETLRMHPPI PLLVPRECME DTKIDGYNIP FKTRVIVNAW AIGRDPQSWD DPESFTPERF
421 ENNSIDFLGN HHQFIPFGAG RRICPGMLFG LANVGQPLAQ LLYHFDWKLP NGQSHENFDM
481 TESPGISATR KDDLVLTIATP YDSY

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FIG. 99

NAME D163-AG11
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 197

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1 CTTCTTCTCTT CCTAACTAAA AATGGAGATT CAGTTTTCTA ACTTAGTTGC ATTCTTGCTC
61 TTTCTCTCCA GCATCTTTCT TGTATTCAAA AAATGGAAAA CCAGAAAACT AAATTTGCCT
121 CCTGGTCCAT GGAAATTACC TTTTATTGGA AGTTTACACC ATTTGGGCTGT GGCAGGTCCA
181 CTTCTCACC ATGGCCTAAA AAATTTAGCC AAACGCTATG GTCCTCTTAT GCATTACAAA
241 CTTGGACAAA TTCCTACACT CGTCATATCA TCACCTCAAA TGGCAAAAAG AGTACTAAAA
301 ACTCACGACC TCGCTTTTGC CACTAGACCA AAGCTTGTCTG TGGCCGACAT CATTCACTAC
361 GACAGCACGG ACATAGCACT TTCGCCATAC GGTGAATACT GGAGACAAAT TCGTAAAAAT
421 TGCATATTGG AACTCTTGAG TGCCAAGATG GTCAAGTTTT TTAGCTCGAT TCGCCAAGAT
481 GAGCTCTCGA AGATGGTTTC ATCTATACGA ACGACGCCCA ATCTTCCAGT CAATCTTACC
541 GACAAGATTT TTTGGTTTAC GAGTTCGGTA ATTTGTAGAT CAGCTTTAGG GAAGATATGT
601 GGTGACCAAG ACAAAATTGAT CATTTTTATG AGGGAATAA TATCATTGGC AGGTGGATTT
661 AGTATTGCTG ATTTTTTCCC TACATGGAAA ATGATTCATG ATATTGATGG TTCAAATCT
721 AAACGGTGA AGGCACATCG TAAGATTGAT GAAATTTTGG AAAATGTGGT AAATGAGCAC
781 AAACAGAAATC GAGCAGATGG TAAAAAGGGT AATGGTGAAT TTGGTGGAGA AGATCTGATT
841 GATGTTTTGT TAAGAGTTAG AGAAAGTGGG GAAAGTCAAA TTCCAATCAC AGATGACAA
901 ATCAAATCAA TATTAATCGA CATGTTCTCT GCCGGATCGG AAACATCATC GACAACTATA
961 ATTTGGGCAT TAGTGAAAT GATGAAGAAA CCAAGTGTTT TAGCAAAGGC ACAAGCTGAA
1021 GTGAGCCAAG CTTTGAAGGG GAAGAAAATT AGTTTTCAAG AGATTGATAT TGATAAGCTA
1081 AAGTATTTGA AGTTAGTGAT CAAAGAAACT TTAAGAATGC ACCCTCCAAT TCCTCTGTTA
1141 GTCCTTAGAG AATGTATGGA AGATACAAAG ATTGATGGTT ACAATATACC TTTCAAACA
1201 AGAGTCATTG TTAATGCATG GGCAATTGGA CGAGATCCTC AAAGTTGGGA TGATCCTGAA
1261 AGCTTTACGC CAGAGAGATT TGAGAATAAT TCTATTGATT TTCTTGAAA TCATCATCAA
1321 TTTATTCCAT TTGGTGCAGG AAGAAGGATT TGTCTTGAA TGCTATTTGG TTTAGCTAAT
1381 GTTGGACAAC CTTTAGCTCA GTTACTTTAT CACTTCGATT GGAAACTCCC TAATGGACAA
1441 ACTACCAAAA ATTTGACAT GACTGAGTCA CCTGGAATTT CTGCTACAAG AAAGGATGAT
1501 CTTATTTTGA TTGCCACTCC TGCTCATTCT TGATTAAGTA TTGCTGCTTT TCTATTGGAG
1561 AATTTTCAAA ATTCATCCAC AATATATAGT GTTGCTAGA GTTGGTTAGC

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SEQ. ID. NO. 198

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1 MEIQFSNLVA FLLFLSSIFL VFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKRYGPLM HLQLGQIPTL VISSPQMAKE VLKTHDLAFA TREKLVVADI IHYDSTDIAL
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMVS SIRTTPNLPV NLTDKIFWFT
181 SSVICRSALG KICGDQDKLI IFMREIISLA GGFSIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILENVV NEHKQNRADG KKGNGEFGGE DLIDVLLRVR ESSEVQIPIT DDNIKSILID
301 MFSAGSETSS TTIIWALAEM MKKPSVLAKA QAEVSQALKG KKISFQEIDI DKLKYLKLV
361 KETLRMHPP I PLLVPRECM E DTKIDGYNIP FKTRVIVNAV AIGRDPQSWD DPESFTPERF
421 ENNSIDFLGN HHQFIFPGAG RRICPGMLFG LANVGQPLAQ LLYHFDWKLP NGQTHQNFDM
481 TESPGISATR KDDLILITAP AHS

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FIG. 100

NAME D163-AG12
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 199

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1 ATCCTTCTTC CTTCCTAGGT CCTAACTAAA AATGGAGATT CAGTTTCTA ACTTAGTTGC
61 ATTCTTGCTC TTTCTCTCCA GCATCTTTCT TCTATTCAAA AAATGGAAAA CCAGAAAACT
121 AAATTTGCCT CCTGGTCCAT GGAAATTACC TTTTATTGGA AGTTTACACC ATTTGGCTGT
181 GGCAGGTCCA CTTCCTCACC ATGGCCTAAA AAATTTAGCC AAACCGTATG GTCCTCTTAT
241 GCATTTACAA CTTGGACAAA TTCCTACACT CATCATATCA TCACCTCAA TGGCAAAAA
301 AGTACTAAAA ACTCACGACC TCGCTTTTGC CACTAGACCA AAGCTTGTCT TGGCCGACAT
361 CATTCACTAC GACAGCACGG ACATAGCATT TTCTCCGTAC GGTGAATACT GGAGACAAAT
421 TCGTAAATTT TGCATATTGG AACTCTTGAG TGCCAAGATG GTCAAATTTT TTAGCTCGAT
481 TCGCCAAGAT GAGCTCTCGA AGATGCTCTC ATCTATACGA ACGACACCCA ATCTTACAGT
541 CAATCTTACT GACAAAATTT TTTGGTTTAC GAGTTCGGTA ACTTGTAGAT CAGCTTTAGG
601 GAAGATATGT GGTGACCAAG ACAAATTGAT CATTTTATG AGGGAAATAA TATCATTGGC
661 AGGTGGATTT AGTATTGCTG ATTTTTCCTC TACATGGAAA ATGATTCATG ATATTGATGG
721 TTCGAAATCT AAACCTGGTG AAGCACATCG TAAGATTGAT GAAATTTTGG GAAATGTTGT
781 TGATGAGCAC AAAAGAACA GAGCAGATGG CAAGAAGGGT AATGGTGAAT TTGGTGGTGA
841 AGATTTGATT GATGTATTGT TAAGAGTTAG AGAAAGTGA GAAGTCAAA TTCCTATCAC
901 AAATGACAAT ATCAAAATCAA TATTAATCGA CATGTCTCT GCGGGATCTG AAACATCATC
961 GACGACTATA ATTTGGGCAT TAGCTGAAAT GATGAAGAAA CCAAGTGTTC TAGCAAAGGC
1021 ACAAGCTGAA GTAAGGCAAG CTTTGAAGGA GAAAAAGGT TTTCAACAGA TTGATCTTGA
1081 TGAGCTAAAA TATCTCAAGT TAGTAATCAA AGAAACCTTA AGAATGCACC CTCCAATTCC
1141 TCTATTAGTT CCTAGAGAAT GTATGGAGGA TACAAAGATT GATGGTTACA ATATACCTTT
1201 CAAAACAAGA GTCATAGTTA ATGCATGGGC AATCGGACGA GATCCAGAAA GTTGGGATGA
1261 CCCGAAAGC TTTATGCCAG AGAGATTGA GAATAGTTCT ATTGACTTTC TTGGAATCA
1321 TCATCAGTTT ATACCATTG GTGCAGGAAG AAGGATTTGT CCGGGAATGC TATTTGGTTT
1381 AGCTAATGTT GGACAACCTT TAGCTCAGTT ACTTTATCAC TTCGATTGGA AACTCCCTAA
1441 TGGACAAAGT CATGAGAATT TCGACATGAC TGAGTCACCT GGAATTTCTG CTACAAGAAA
1501 GGATGATCTT GTTTTGATTG CCACCTCTTA TGATTCTTAT TAAGCAGTAG CAGAAATAAA
1561 AAGCCGGGGC AAACAGAAAA AAGTATTGCT GCTTCTAGGT ATTTTCTATT GGATAAATTT
1621 CAAAATTCAT CCACAATATT TAGTGTTCG TAGAGTTGGT TAGC

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SEQ. ID. NO. 200

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1 MEIQFSNLVA FLLFLSSIFL LFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKEYPLM HLQLGQIPTL IISSPQMAKE VLKTHDLAFA TRPKLVVADI IHYDSTDIAP
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMLS SIRTTPNLTV NLTDKIFWFT
181 SSVTCRSALG KICGDDKLI IFMREIISLA GGFSIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILGNVV DEHKKNRADG KKGNGEFGGE DLIDVLLVRV ESSEVQIPIT NDNKISILID
301 MFSAGSETSS TTIIWALAEM MKKPSVLAKA QAEVRQALKE KKGFGQIDLD ELKYLKLVIK
361 ETLRMHPPPI LLVPRECMED TKIDGYNIPF KTRVIVNAWA IGRDPESWDD PESFMPERFE
421 NSSIDFLGNH HQFIPFGAGR RICPGMLEGL ANVGQPLAQL LYHFDWKLPN QGSHENFDMT
481 ESPGISATRK DDLVLIATPY DSY

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FIG. 101

NAME D205-BG9
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 201

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1 TTCTTATTTT GATTCAACCA TGGAGAACCA ATACTCCTAC TCATTCTCTT CCTACTTCTA
61 CTTAGCTATA GTACTGTTTC TTCTTCCAAT TTTGGTCAAA TATTCTTCC ATCGGAGAAG
121 AAATTTACCT CCAAGTCCAT TTTCTCTTCC AATAATTGGT CACCTTTACC TTCTCAAGAA
181 AACTCTCCAT CTCACCTCTAA CATCCTTATC AGCTAAATAT GGTCTTGTTT TATACCTCAA
241 ATTGGGCTCT ATGCCTGTGA TTGTTGTGTC CTCACCATCT GCTGTTGAAG AATGTTTAAC
301 CAAGAATGAT ATCATATTCG CAAATAGGCC CAAGACCGTG GCTGGTGACA AGTTTACCTA
361 CAATTATACT GTTTATGTTT GGGCACCCCTA TGGCCAACTT TGGAGAATTC TTCGCCGATT
421 AACTGTGCTT GAACCTCTTCT CTTACACATAG CCTACAGAAA ACTTCTATCC TTAGAGATCA
481 AGAAGTTGCA ATATTTATCC GTTCGTTATA CAAATCTCA AAGGATAGTA GCAAAAAAGT
541 CGATTTGACC AACTGGTCTT TTACTTTGGT TTTCAATCTT ATGACCAAAA TTATTGCTGG
601 GAGACATATT GTGAAGGAGG AAGATGCTGG CAAGGAAAAG GGCATTGAAA TTATTGAAAA
661 ACTTAGAGGG ACTTCTTAG TAACTACATC ATCTTTGAAT ATGTGTGATT TCTTGCCAGT
721 ATTCAGGTGG GTTGTTTACA AAGGGCTGGA GAAGAAGATG GCCTCAATTC ACAATAGAAG
781 AAATGAATTC TTGAACAGCT TGCTTGATGA ATTCGACAC AAGAAAAGTA GTGCTTCACA
841 ATCTAACACA ACTGTTGGAA ACATGGAGAA GAAAACCACA CTGATTGAAA AGCTCTTGTC
901 TCTTCAAGAA TCAGAGCCTG AATTCTACAC TGATGATATC ATCAAAAAGTA TTATGCTGGT
961 AGTTTTTGTG GCAGGAACAG AGACCTCATC AACAACCATC CAATGGGTAA TGAGGCTTCT
1021 TGTAAGCTCAC CCTGAGGCAT TGTATAAGCT ACGAGCTGAC ATTGACAGTA AAGTTGGGAA
1081 TAAGCGCTTG CTGAATGAAT CAGACCTCAA CAAGCTTCCG TATTTGCATT GTGTTGTAA
1141 TGAGACAATG AGATTATACA CTCCGATACC ACTTTTATTG CCTCATTATT CAACTAAAGA
1201 TTGTATTGTG GAAGGATATG ATGTACCAAA ACATACAATG TTGTTTGTC ACGCTTGGGC
1261 CATTACACAGG GATCCCAAGG TATGGGAGGA GCCTGACAAG TTCAAGCCAG AGAGATTTGA
1321 GGCAACAGAA GGGGAAACAG AAAGGTTCAA TTACAAGCTT GTACCATTTG GAATGGGGAG
1381 AAGAGCGTGC CCTGGAGCTG ATATGGGGTT GCGAGCAGTT TCTTTGGCAT TAGGTGCACT
1441 TATTCAATGC TTTGACTGGC AAATTGAGGA AGCGGAAAGC TTGAGGAGAA GCTATAATTC
1501 TAGAATGACT ATGCAGAACA AGCCTTTGAA GGTGTCTGTC ACTCCACGCG AAGATCTTGG
1561 CCAGCTTCTA TCCCAACTCT AAGGCAATTT ATCAATGCCA AACGTAATCT TCATCTACCA
1621 CTATG

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SEQ. ID. NO. 202

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1 MENQSYSFS SYFYLAIVLF LLPILVKYFF HRRRLPPSP FSLPIIGHLY LLKKTLLHLL
61 TSLSAKYGPV LYLKLGSMFV IVVSSPSAVE ECLTKNDIIF ANRPKTVAGD KFTYNTYVYV
121 WAPYQQLWRI LRRLTVVELF SSHSLQKTSI LRDQEVAFI RSLYKFSKDS SKKVDLTNWS
181 FTLVFNLMTK IIAGRHHVKE EDAGKEKGIE IIEKLRGTFL VTTSFLNMCD FLFVFRWVG
241 KGLEKKMASI HNRNEFLNS LLDEFRRHKS SASQSNTTVG NMEKKTLLIE KLLSLQSESE
301 EFYTDDIIS IMLVVVFAGT ETSSTTIQWV MRLLVAHPEA LYKLRADIDS KVGNNKRLNE
361 SDLNKLPHYH CUVNETMRLY TPIPLLLPHY STKDCIVEGY DVPKHTMLFV NAWAIHRDPK
421 VWEEPDKFKP ERFEATEGET ERFNYKLVFF GMGRRACPGA DMGLRAVSLA LGALIQCFDW
481 QIEEAESLEE SYNSRMTMQN KPLKVCTPR EDLGQLLSQL

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FIG. 102

NAME D207-AA5
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 203

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1 AACCAACCTT CCTTTCTTA CTTAGTAAAA TGGATATTCA GTCTTCTCCT TTCAACTTAA
61 TTGCTTTGCT ACTCTTCATT TCATTTCCTT TTATCCTATT GAAAAAGTGG AATACCAAAA
121 TCCCAAAGTT ACCTCCAGGT CCATGGAGAC TTCCCCTTAT TGGCAGCCTC CATCACTTGA
181 AAGGTAAACT CCCACACCAT CATCTTAGAG ATTTAGCCCG AAAATATGGA CCTCTCATGT
241 ATTTACAACT TGGAGAAGTT CCTGTAGTTG TAATATCTTC GCCACGTATA GCAAAAAGCTG
301 TACTAAAAAC TCATGATCTT GCTTTTGCAA CGAGGCCTCG GTTCATGTCC TCGGACATTG
361 TGTTTTACAA AAGCAGGGAC ATATCATTGG CCCCATATGG CGATTACTGG AGACAAATGC
421 GTAAAATATT AACACAAGAA CTCTTGAGTA ACAAGATGCT CAAGTCATTT AGCACAATCC
481 GAAAGGATGA GCTCTCGAAG CTCCTCTCGT CGATTCTGTT AGCAACAGCT TCTTCTGCAG
541 TGAACATAAA CGAAAAGCTT CTCTGGTTTA CAAGTTCGAT GACTTGTAGA TTAGCCTTTG
601 GAAAAATATG CAACGATCGT GATGAATTGA TTATGTTAAT AAGGGAGATA TTAGCATTAT
661 CAGGAGGATT TGATGTGTGT GATTTGTTCC CTTCAATGAA ATTACTTCAC AATATGAGCA
721 ACATGAAAGC TAGATTGACG AATGTTTACC ATAAGTATAA TCTAATTATG GAGAATATCA
781 TCAATGAGCA CAAAGAGAAT CATGCAGCAG GGATAAAGGG AAATAACGAG TTTGGTGGCG
841 AAGATATGAT TGATGCTTTA CTGAGGGTTA AGGAGAATAA TGAGCTTCAA TTTCTATCG
901 AAAATGACAA CATGAAAGCA GTAATTCTGG ACTTGTTTAT TGCTGGAAC GAACTTCAT
961 ATACTGCAAT TATATGGGCA CTATCAGAAT TGATGAAGCA CCCAAGTGT ATGGCCAAGG
1021 CACAAGCTGA AGTGAGAAAA GTCTTCAAAG AAAATGAAAA CTTGGACGAA AATGATCTTG
1081 ACAAGTTGCC ATACTTAAAA TCAGTGATCA AAGAAACACT AAGGATGCAT CCTCCAGTTC
1141 CTTTATTAGG ACCTAGAGAA TGCAGAGAAC AAATGAGAT TGATGGATAT ACTGTACCTC
1201 TTAAAGCTAG AGTAATGGTT AATGCATGGG CAATTGGGAG AGATCCTGAA AGTTGGGAAG
1261 ATCCTGAAAG TTTCAAACCC GAGCGATTG AAAATATTTT TGTGATCTT ACGGGAAATC
1321 ACTATCAGTT CATCCCTTTC GGTTCAGGAA GAAGAATGTG TCCAGGAATG TCGTTTGGTT
1381 TAGTTAACAC TGGGCATCCT TTAGCTCAGT TGCTCTATTT CTTTGACTGG AAATTCCTC
1441 ATAAGGTTAA TGCAGCTGAT TTTCACACTA CTGAAACAAG TAGAGTTTTT GCAGCAAGCA
1501 AAGATGACCT TACTTTGATT CCAACAAATC ACATGGAGCA AGAGTAGCTC TAAATTGAAT
1561 TCTTGTCTTG GAACAATAAA AGAAGAAACT CCAGCTTGGT CTACATTATT TCTTTTTGCT
1621 TTATATTAGT ATGGGTGTGT TCAGTTTCTT ATTTTAAAG GTACCTGAA AGATAAAGGG
1681 CTATATAAAC CAGTGAGACT TTTTATTGGT TGCAAGGTTT TAGATCAAGC CATAAGACAG
1741 CATATTTTAT TCAAAAAAAA AAAAAA

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SEQ. ID. NO. 204

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1 MDIQSSPFNL IALLLFISFL FILLKKWNTK IPKLPPGPWR LPLIGSLHHL KGKLPHHHLR
61 DLARKYGPLM YLQLEGEVTV VISSPRIAKA VLKTHDLAFA TRPRFMSSDI VFYKSRDISF
121 APYGDYWRQM RKILTQELLS NKMLKSFTSI RKDELSKLLS SIRLATASSA VNIKELLWF
181 TSCMTCRLAF GKICNDRDEL IMLIREILAL SGGFDVCDLF PSWKLLHNMS NMKARLTNVH
241 HKYNLIMENI INEHKENHAA GIKGNNEFGG EDMIDALLRV KENNELQFPI ENDNMKAVIL
301 DLFIAGTETS YTAIWALSE LMKHPSVMAM AQAQVRKVFK ENENLDENDL DKLPYLKSVI
361 KETLRMHPPV PLLGPRECRE QTEIDGYTVP LKARVMVNAW AIGRPDESWE DPESFKPERF
421 ENISVDLTGN HYQFIPFGSG RRMCPGMSFG LVNTGHPLAQ LLYFFDWFKF HKVNAADFHT
481 TETSRVFAAS KDDLYLIPTN HMEQE

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FIG. 103

NAME D207-AB4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 205

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1 AACCAACCTT CTTTTCTTA CTTAGTAAAA TGGATATTCA GTCTTCTCCT TTCAACTTAA
61 TTGCTTTGCT ACTCTTCATT TCATTTCTTT TTATCCTATT GAAAAAGTGG AATACCAAAA
121 TCCCAAAGTT ACCTCCAGGT CCATGGAGAC TTCCCTTAT TGGCAGCCTC CATCACTTGA
181 AAGGTAAACT CCCACACCAT CATCTTAGAG ATTTAGCCCG AAAATATGGA CCTCTCATGT
241 ATTTACAAC TGGAGAAGTT CCTGTAGTTG TAATATCTTC GCCACGTATA GCAAAAGCTG
301 TACTAAAAAC TCATGATCTT GCTTTTGCAA CGAGGCCTCG GTTCATGTCC TCGGACATTG
361 TGTTTTACAA AAGCAGGGAC ATATCATTCG CCCCATATGG CGATTACTGG AGACAATGC
421 GTAAAAATATT AACACAAGAA CTCTTGAGTA ACAAGATGCT CAAGTCATTT AGCACAATCC
481 GAAAGGATGG GCTCTCGAAG CTCCTCTCGT CGATTCGTTT AGCAACAGCT TCTTCTGCAG
541 TGAACATAAA CGAAAAGCTT CTCTGTTTA CAAGTTGCAT GACTTGTA GA TTAGCCTTTG
601 GAAAAATATG CAACGATCGT GATGAATTGA TTATGTTAAT AAGGGAGATA TTAGCATTAT
661 CAGGAGGATT TGATGTGTGT GATTTGTTC CTTTCATGGA ATTACTTCAC AATATGAGCA
721 ACATGAAAGC TAGATTGACG AATGTTACCC ATAAGTATAA TCTAATTATG GAGAATATCA
781 TCAATGAGCA CAAAGAGAAT CATGCAGCAG GGATAAAGGG AAATAACGAG TTTGGTGGCG
841 AAGATATGAT TGATGCTTTA CTGAGGGTTA AGGAGAATAA TGAGCTTCAA TTTCCATTCG
901 AAAATGACAA CATGAAAGCA GTAATCTGG ACTTGTTTAT TGCTGGAACT GAAACTTCAT
961 ATACTGCAAT TATATGGGCA CTATCAGAAT TGATGAAGCA CCAAGTGTT ATGGCCAAGG
1021 CACAAGCTGA AGTGAGAAAA GTCTTCAAAG AAAATGAAAA CTTGGACGAA AATGATCTTG
1081 ACAAGTTGCC ATACTTAAAA TCAGTGATCA AAGAAACACT AAGGATGCAT CCTCCAGTTC
1141 CTTTATTAGG ACCTAGAGAA TGCAGAGAAC AAAGTGAAT TGATGGATAT ACTGTACCTC
1201 TTAAGCTAG AGTAATGGTT AATGCATGGG CAATTGGAAG AGATCCTGAA AGTTGGGAAG
1261 ATCCTGAAAG TTTCAAACCC GAGCGATTTG AAAATATTTT TGTGATCTT ACGGGAATC
1321 ACTATCAGTT CATTCTTTT GGTTCAGGAA GAAGAATGTG TCCAGGAATG TCGTTTGGTT
1381 TAGTTAACAC TGGGCATCCT TTAGCTCAGT TGCTCTATTT CTTTGACTGG AAATCCCTC
1441 ATAAGGTTAA TGCAGCTGAT TTTCACACTA CTGAAACAAG TAGAGTTTT GCAGCAAGCA
1501 AAGATGACCT CTAATGATT CCAACAAATC ACATGGAGCA AGAGTAGCTC TAAATGTAAT
1561 TCTTGTCTTG GAACGATAAA AGAAGAACT CCAGCTTGGT CTACATTATT TCTTTTGTG
1621 TTATATTAGT ATGGGTGTGT TCAGTTTCTT GTTTTAAAG GTACCCTGAA AGATAAAGG
1681 CTATATAAAC CAGTGAGACT TTTTATTGAA AAAAAAAAAA AAAAAAAAAA AAAAAA

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SEQ. ID. NO. 206

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1 MDIQSPEFNL IALLFISFL FILLKKWNTK IPKLPPGPWR LPLIGSLHHL KGKLPHHHLR
61 DLARKYGPLM YLQGEVPPV VISSPRIAKA VLKTHDLAFA TRPREMSSDI VFYKSRDISF
121 APYGDYWRQM RKILTQELLS NKMLKSFSSTI RKDELSKLLS SIRLATASSA VNINEKLLWF
181 TSCMTCLRAF GKICNDRDEL IMLIREILAL SGGFDVCDLF PSWKLLHNMS NMKARLTNVH
241 HKYNLIMENI INEHKENHAA GIKGNNEFGG EDMIDALLRV KENNELQFPI ENDNMKAVIL
301 DLFIAGTETS YTAIIWALRE LMKHPSVMAK AQAEVRKVFK ENENLDENDL DKLPYLKSVI
361 KETLRMHPPV PLLGPRECRE QTEIDGYTVP LKARVMVNAW AIGRDPESWE DPESFKPERF
421 ENISVDLTGN HYQFIPFGSG RRMCPGMSFG LVNTGHPLAQ LLYLFDWKFP HVVNAADFHT
481 TETSRVFAAS KDDLILIPTN HMEQE

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FIG. 104

NAME D207-AC4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 207

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1 AACCAACCTT CCTTTCTTA CTTAGTAAAA TGGATATTCA GTCTTCTCCT TTCAACTTAA
61 TTGCTTTGCT ACTCTTCATT TCATTCTTTT TTATCCTATT GAAAAAGTGG AATACCAAAA
121 TCCCAAAGTT ACCTCCAGGT CCATGGAGAC TTCCCTTAT TGGCAGCCTC CATCACTTGA
181 AAGGTAAACT CCCACACCAT CATCTTAGAG ATTTAGCCCG AAAATATGGA CCTCTCATGT
241 ATTTACAACT TGGAGAAGTT CCTGTAGTTG TAATATCTTC GCCACGTATA GCAAAAGCTG
301 TACTAAAAAC TCATGATCTT GCTTTTGCAA CGAGGCCTCG GTTCATGTCC TCGGACATTG
361 TGTTTTACAA AAGCAGGGAC ATATCATTCG CCCCATATGG CGATTACTGG AGACAAATGC
421 GTAAAAATATT AACACAAGAA CTCTTGAGTA ACAAGATGCT CAAGTCATT AGCACAATCC
481 GAAAGGATGA GCTCTCGAAG CTCCTCTCGT CGATTCTGTT AGCAACAGCT TCTTCTGCAG
541 TGAACATAAA CGAAAAGCTT CTCTGGTTTA CAAGTTCAT GACTTGTAGA TTAGCCTTTG
601 GAAAAATATG CAACGATCGT GATGAATTGA TTATGTTAAT AAGGGAGATA TTAGCATTAT
661 CAGGAGGATT TGATGTGTGT GATTGTGTTCC CTTTCATGAA ATTACTTCAC AATATGAGCA
721 ACATGAAAGC TAGATTGACG AATGTTCCAC ATAAGTATA TCTAATTATG GAGAATATCA
781 TCAATGAGCA CAAAGAGAAAT CATGCAGCAG GGATAAAGGG AAATAACGAG TTTGGTGGCG
841 AAGATATGAT TGATGCTTTA CTGAGGGTTA AGGAGAATAA TGAGCTTCAA TTTCTATCG
901 AAAATGACAA CATGAAAGCA GTAATTCTGG ACTTGTTTAT TGCTGGAAC GAAACTTCAT
961 ATACTGCAAT TATATGGGCA CTATCAGAAT TGATGAAGCA CCCAAGTGT ATGGCCAAGG
1021 CACAAAGCTGA AGTGAGAAAA GTCTTCAAAG AAAATGAAAA CTTGGACGAA AATGATCTTG
1081 ACAAGTTGCC ATACTTAAAA TCAGTGATCA AAGAAACACT AAGGATGCAT CCTCCAGTTC
1141 CTTTATTAGG ACCTAGAGAA TGCAGAGAAC AAAGTGAGAT TGATGGATAT ACTGTACCTC
1201 TTAAGAGTAG AGTAATGGTT AATGCATGGG CAATTGGAAG AGATCCTGAA AGTTGGGAAG
1261 ATCCTGAAAG TTTCAAACCC GAGCGATTG AAAATATTTT TGTGATCTT ACGGGAAATC
1321 ACTATCAGTT CATTCCCTTC GGTTCAGGAA GAAGAATGTG TCCAGGAATG TCGTTTGGTT
1381 TAGTTAACAC TGGGCATCCT TTAGCTCAGT TGCTCTATCT CTTTGACTGG AAATCCCTC
1441 ATAAGGTTAA TGCAGTGAT TTTCACACTA CTGAAACAAG TAGAGTTTTT GCAGCAAGCA
1501 AAGATGACCT CTACTTGATT CCAACAAATC ACATGGAGCA AGAGTAGCTC TAAATTGAAT
1561 TCTTGCTCTG GAACAATAAA AGAAGAAACT CCAGCTTGGT CTACATTAT TCTTTTGTCT
1621 TTATATTAGT ATGGGTGTGT TCAGTCTCTT GTTTTAAAG GTACCTTGAA AGATAAAGGG
1681 CTATATAAAC CAGTGAGACT TTTTATTGGT TGCAAGGTTT TAGATCAAGC CATAAGACAG
1741 CATATTTTAT TCCACCATT TCTATCATGT TTAATAAAGT TCCTTTCGTT TATTGTTAG
1801 AAAAAAAAAA AAAAAAAAAA AAA

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SEQ. ID. NO. 208

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1 MDIQSSPFNL IALLLFISFL FILLKKWNTK IPKLPPGPWR LPLIGSLHHL KGKLPHHHLR
61 DLARKYGPLM YLQLGEVPV VISSPRIAKA VLKTHDLAFA TRPRFMSSDI VFYKSRDISF
121 APYGDYWRQM RKILTQELLS NKMLKSFSTI RKDELSKLLS SIRLATASSA VNINEKLLWF
181 TSCMTCRLAF GKICNDRDEL IMLIREILAL SGGFDVCDLF PSWKLLHNMS NMKARLTNVH
241 HKYNLIMENI INEHKENHAA GIKGNNEFGG EDMIDALLRV KENNELQFPI ENDNMKAVIL
301 DLFIAGTETS YTAIIWALSE LMKHPSVMAK AQAEVRKVFK ENENLDENDL DKLPYLKSVI
361 KETLRMHPPV PLLGPRECRE QTEIDGYTVP LKARVMVNAW AIGRDPESWE DPESFKPERF
421 ENISVDLTGN HYQFIPFGSG RRMCPGMSFG LVNTGHPLAQ LLYLFDWKFP HKVNAADFHT
481 TETSRVFAAS KDDLILIPFN HMEQE

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FIG. 105

NAME D209-AA10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 209

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1 ATATGCAACT GAGATTTGAA GAATACCAAC TAACCAAAAT GCAGTTCTTC AGCCTGGTTT
61 CCATTTTCCT ATTTCATCT TTCTCTTTT TGTTAAGGGT ATGGAAGAAC TCCAATAGCC
121 AAAGCAAAA GTTGCCACCA GGTCCATGGA AACTACCAAT ACTAGGAAGT ATGCTTCATA
181 TGGTTGGTGG ACTACCACAC CATGTCCTTA GAGATTTAGC CAAAAAATAT GGACCACTTA
241 TGCACCTTCA ATTAGGTGAA GTTCTGCGG TTGTGGTTAC TTCTCTGTAT ACGGCAAAAG
301 AAGTATTAAA AACTCATGAC ATCGCTTTTG CGTCTAGGCC TAGCCTTTTG GCCCCGGAGA
361 TTGTCTGTTA CAATAGGTCT GATCTAGCCT TTTGCCCTTA TGGCGACTAT TGGAGACAAA
421 TCGGTAAAAT ATGTGTCTTG GAAAGTGCTA GTGCCAAGAA TGTTCGGACA TTTAGCTCTA
481 TTAGGCGGAA TGAAGTTCTT CGTCTCATTA ATTTATCCG GTCATCTTCT GGTGAACCTA
541 TTAATGTTAC GGAAGGATC TTTTGTTC AAGCTCCAT GACATGTAGA TCAGCGTTTG
601 GGCAAGTGTT CAAAGAGCAA GACAAATTTA TACAACTAAT TAAAGAAGTG ATACTCTTAG
661 CAGGAGGGTT TGATGTGGCT GACATATCC CTTCACTGAA GTTCTTTCAT GTGCTCAGTG
721 GAATGAAGGG TAAGATTATG AATGCACACC ATAAGGTAGA TGCCATTGTT GAGAATGTCA
781 TCAATGAGCA CAAGAAAAAT CTTGCAATTG GGAAACTTAA TGGAGCGTTA GGAGGTGAAG
841 ATTTAATTGA TGTCTTCTA AGACTTATGA ATGATGGAGG CCTTCAATT CCTATCACC
901 ACGACAACAT CAAAGCTATA ATTTTGTACA TGTGTGCTGC CGGGACAGAG ACTTCATCGT
961 CAACAATTGT GTGGGCTATG GTAGAAATGG TGAATAATCC AGCCGTATT CCGAAAGCTC
1021 AAGCAGAAGT AAGAGAAGCA TTTAGAGGAA AAGAACTTT CGATGAAAT GATGTGGAGG
1081 AGCTAAACTA CCTAAAGTTA GTAATAAAG AAACCTAAG ACTTCATCCA CCGGTTCCAC
1141 TTTTGTCTCC AAGAGAATGT AGGGAAGAGA CAAATATAAA CGGCTACACT ATTCCTGTAA
1201 AGACCAAGT CATGGTTAAT GTTTGGGCTT TGGGAAGAGA TCCAAAATAT TGGATGACG
1261 CAGAACTTT TATGCCAGAG AGATTTGAGC AGTGCTCTAA GGATTTTGTT GGTAAATAAT
1321 TTGAATATCT TCCATTGGT GCGGGAAGGA GGATTTGTCC TGGGATTTCG TTTGGCTTAG
1381 CTAATGCTTA TTTGCCATTG GCTCAATTAC TATATCACTT CGATTGGAAA CTCCTGCTG
1441 GAATCGAACC AAGCGACTTG GACTTGACTG AGTTGGTTGG AGTAAGTCCC GCTAGAAAAA
1501 GTGACCTTTA CTTGGTTGCG ACTCCTTATC AACCTCCTCA AAAAGTGATT AATGGTTTCA
1561 AGTTTTTATT TCCTAGCAAA CCCCCTATT GTCTATCTT TCTTTTGGT TTTTCGGTTT
1621 TATCTACTCT AATACATGCA TCTTTTACCA TATAGGAATG TACCATGTTG TCG

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SEQ. ID. NO. 210

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1 MQLRFEEYQL TKMQFFSLVS IFLEFLSLFL LRVWKNNSQ SKKLPPGPWK LPILGSMMLHM
61 VGGPLPHVLR DLAKKYGLM HLQLGEVSAV VVTSPDTAKE VLKTHDIAFA SRPSLLAPEI
121 VCYNRSDLAF CPYGDYWRQM RKICVLEVL AKNVRTFSSI RRNEVRLIN FIRSSSGEPI
181 NVTERIFLFT SSMTCRFAFG QVFKEQDKFI QLIKEVILLA GGFDVADIFP SLKFLHVLG
241 MKGKIMNAHH KVDAIVENVI NEHKKNLAIK KTNALGGED LIDVLLRLMN DGGLOFPITN
301 DNIKAIIFDM FAAGTETSSS TIVWAMVEMV KNPVFAKAQ AEVREAFRGK ETFDENDVEE
361 LNYLKLVIKE TLRHPPVPL LLPRECREET NINGYTIPVK TKVMNVWVAL GRDPKYWVND
421 ETFMPEFEQ CSKDFVGNF EYLPFGGRR ICPGISFGLA NAYLPLAQLL YHFDWKLPA
481 IEPDLDLTE LVGVTAARKS DLYLVATPYQ PPQK

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FIG. 106

NAME D209-AA12
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 211

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1 ATATGCAACT GAGATTGTGA GAATACCAAC TAACCAAAAT GCAGTTCCTC AGCTTGGTTT
61 CCATTTTCCT ATTTCTATCT TTCCTCTTTT TGTTAAGGAT ATGGAAGAAC TCCAATAGCC
121 AAAGCAAAAA GTTGCCACCA GGTCCATGGA AACTACCAAT ACTAGGAAGT ATGCTTCATA
181 TGTTTGGTGG ACTACCACAC CATGTCCTTA GAGATTTAGC CAAAAATATAT GGACCACCTA
241 TGCACCTTCA ATTAGGTGAA GTTTCTGCGG TTGTGGTTAC TTCTCCTGAT ACGGCAAAAG
301 AAGTATTAAA AACTCATGAC ATCGCTTTTG CGTCTAGGCC TAGCCTTTTG GCCCGGAGA
361 TTGTCTGTGA CAATAGGTCT GATCTAGCCT TTGCCCCCTA TGGCGACTAT TGGAGACAAA
421 TGCCTAAAAA ATGTGTCTTG GAAGTGCTCA GTGCCAAGAA TGTCGGACA TTTAGCTCTA
481 TTAGGCGGAA TGAAGTTCTT CGTCTCATTA ATTTTATCCG GTCATCTTCT GGTGAACCTA
541 TTAATGTTAC GGAAGGATC TTTTGTGTTA CAAGCTCCAT GACATGTAGA TCAGCGTTTG
601 GGCAGGTGTT CAAAGAGCAA GACAAATTTA TACAACTAAT TAAAGAAGTG ATACTCTTAG
661 CAGGAGGGTT TGATGTGGCT GACATATTCC CTTCACTGAA GTTTCCTCAT GTGCTCAGTG
721 GAATGAAGGG TAAGATTATG AATGCACACC ATAAGGTAGA TGCCATTGTT GAGAATGTCA
781 TCAATGAGCA CAAGAAAAAT CTTGCAATTG GGAAACTAA TGGAGCGTTA GGAGGTGAAG
841 ATTTAATTGA TGTCTTCTA AGACTTATGA ATGATGGAGG CCTTCAATTT CCTATCACA
901 ACGACAACAT CAAAGCCATA ATTTTGTGCA TGTGTGCTGC CGGGACAGAG ACTTCATCGT
961 CAACAATTGT GTGGGCTATG GTAGAAATGG TGAAAAATCC AGCCGTATTC GCGAAAGCTC
1021 AAGCAGAAGT AAGAGAAGCA TTTAGAGGAA AAGAACTTTT ACTTCATCCA CCGGTTCCAC
1081 AGCTAAACTA CCTAAAGTTA GTAATAAAAG AAACCTAAAT CCTATCACA
1141 TTTTGCTCCC AAGAGAATGT AGGGAAGAGA CAAATATAAA CGGGTACACT ATTCCTGTAA
1201 AGACCAAAGT CATGGTTAAT GTTTGGGCTT TGGGAAGAGA TCCAAAAATAT TGGAAATGACG
1261 CAGAAACTTT TATGCCAGAG AGATTTGAGC AGTGCTCTAA GGATTTTGTG GGTAAATAATT
1321 TTGAATATCT TCCATTTGGT GCGGGAAGGA GGATTTGTCC TGGGATTTG TTTGGCTTAG
1381 CTAATGCTTA TTTGCCATTG GCTCAATTAC TATATCACTT CGATTGGAAA CTCCTGCTG
1441 GAATCGAACC AAGCGACTTG GACTTGACTG AGTTGGTTGG AGTAACTGCC GCTAGAAAAA
1501 GTGACCTTTA CTGTTGTTGCG ACTCCTTATC AACCTCCTCA AAAGTGATTT AATGGTTTCA
1561 AGTTTTTAT TCTTAGCAAA CCCCACTATT GTCCTATCTT TCTTTTGGTG TTTTCGGTTT
1621 TATCTACTCT AATACATGCA TCTTTTACCA TATAGGAATG TACCATGTTG TCG

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SEQ. ID. NO. 212

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1 MQLRFEYQL TKMQFFSLVS IFLFLSFLFL LRIWKNSNSQ SKKLPPGPWK LPILGMLHM
61 VGGLPHHVL DLAKKYGPLM HLQLGEVSAV VVTSPDTAKE VLKTHDIAFA SRPSLLAPEI
121 VCYNRSDLAF CPYGDYWRQM RKICVLEVL AKNVRTFSSI RNNEVLRLIN FIRSSSGEPI
181 NVTERIFLEF SSMTCRSAFG QVFKEQDKFI QLIKEVILLA GGFVDVADIFP SLKFLHVLSG
241 MKGKIMNAHH KVDAIVENVI NEHKKNLAIK KTNALGGED LIDVLLRLMN DGGLQFPITN
301 DNIKAIIFDM FAAGTETSSS TIVWAMVEMV KNPVAFKAQ AEVREAFRGK ETFDENDVEE
361 LNYLKLVIKE TLRHPPVPL LLPRECREET NINGYTIPVK TKVMNVWVAL GRDPKYWDA
421 ETFMFERFEQ CSKDFVGNF EYLPFGGRR ICPGISFGLA NAYLPLAQLL YHFDWKLPA
481 IEPSDLDELTE LVGVTAARKS DLYLVATPYQ PPQK

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FIG. 107

NAME D209-AH10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 213

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1 ATATGCAACT GAGATTTGAA GAATACCAAC TAACCAAAGT GCAGTTCCTC AGCTTGGTTT
61 CCATTTTCCT ATTTCTATCT TTCCTCTTTT TGTTAAGGAT ATGGAAGAAC TCCAATAGCC
121 AAAGCAAAAA GTTGCCACCA GGTCCATGGA AACTACCAAT ACTAGGAAGT ATGCTTCATA
181 TGGTTGGTGG ACTACCACAC CATGTCCTTA GAGATTTAGC CAAAAAATAT GGACCACTTA
241 TGCACCTTCA ATTAGGTGAA GTTTCGCGG TTGTGGTTAC TCTCCTGAT ACGGCAAAAG
301 AAGTATTAAA AACTCATGAC ATCGCTTTTG CGTCTAGGCC TAGCCTTTTG GCCCCGGAGA
361 TTGTCTGTGA CAATAGGTCT GATCTAGCCT TTTGCCCTTA TGGCGACTAT TGGAGACAAA
421 TGCCTAAAAT ATGTGTCTTG GAAGTGCTCA GTGCCAAGAA TGTTCGGACA TTTAGCTCTA
481 TTAGCGCGAA TGAAGTTCCT CGTCTCATTA ATTTTATCCG GTCATCTTCT GGTGAACCTA
541 TTAATGTTAC GGAAGGATC TTTTGTGTCA CAAGCTCCAT GACATGTAGA TCAGCGTTTG
601 GGCAGGTGTT CAAAGAGCAA GACAAATTTA TACAATAAT TAAAGAAGTG ATACTCTTAG
661 CAGGAGGGTT TGATGTGGCT GACATATTCC CTTCACTGAA GTTTCCTCAT GTGCTCAGTG
721 GAATGAAGGG TAAGATTATG AATGCACACC ATAAGGTAGA TGCCATTGTT GAGAATGTCA
781 TCAATGAGCA CAAGAAAAAT CTTGCAATTG GGAATACTAA TGAGCGCTTA GGAGGTGAAG
841 ATTTAATTGA TGTTCCTCTA AGACTTATGA ATGATGGAGG CCTTCAATTT CCTATACCA
901 ACGACAACAT CAAAGCTATA ATTTTGTACA TGTTTGCTGC CGGGACGGAG ACTTCATCGT
961 CAACAATTGT GTGGGCTATG GTAGAAATGG TGAATAATCC AGCCGTATTC GCGAAAGCTC
1021 AAGCAGAAGT AAGAGAAGCA TTTAGAGGAA AAGAACTTT CGATGAAAAT GATGTGGAGG
1081 AGCTAAACTA CCTAAAGTTA GTAATAAAAG AAACCTAAG ACTTCATCCA CCGGTTCCAC
1141 TTTTGCTCCC AAGAGAATGT AGGGAAGAGA CAAATATAAA CGGCTACACT ATTCCTGTAA
1201 AGACCAAAGT CATGGTTAAT GTTTGGGCTT TGGGAAGAGA TCCAAAATAT TGGAAAGAG
1261 CAGAACTTTT TATGCCAGAG AGATTTGAGC AGTGCTCTAA GGTATTTGTT GGTAAATAAT
1321 TTGAATATCT TCCATTGGT GCGGGAAGGA GGATTTGTCC TGGGATTTCG TTTGGCTTAG
1381 CTAATGCTTA TTTGCCATTG GCTCAATTAC TATATCACTT CGATTGGAAA CTCCTGCTG
1441 GAATCGAACC AAGCGACTTG GACTTGACTG AGTTGGTTGG AGTAACTGCC GCTAGAAAAA
1501 GTGACCTTTA CTGTTGTGCG ACTCCTTATC AACCTCCTCA AAAGTGATT AATGGTTTCA
1561 AGTTTTTATT TCCTAGCAAA CCCCACTATT GTCCTATCTT TCTTTTGGTG TTTTCGGTTT
1621 TATCTACTCT AATACATGCA TCTTTTACCA TATAGGAATG TACCATGTTG TCG

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SEQ. ID. NO. 214

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1 MQLRFEELYQL TKVQFFSLVS IFLFLSFLFL LRIWKNSNSQ SKKLPPGPWK LPILGSMMLHM
61 VGGLPHHVLR DLAKKYGPLM HLQLGEVSAV VVTSPDTAKE VLKTHDIAFA SRPSLLAPEI
121 VCYNRSDLAF CPYGDYWRQM RKICVLEVL AKNVRTFSSI RRNEVLR LIN FIRSSSGEPI
181 NVTERIFLFT SSMTCRSAFG QVFKEQDKFI QLIKEVILLA GGFVDADIFP SLKFLHVLG
241 MKGKIMNAHH KVDAIVENVI NEHKKNLAIG KTNALGGED LIDVPLRLMN DGGQLQFPITN
301 DNIKAIIFDM FAAGTETSSS TIVWAMVEMV KNPVAFKAQ AEVREAFRGK ETFDENDVEE
361 LNYLKLVIKE TLR LHPPVPL LLPRECREET NINGYTI PVK TKVMVNVWAL GRDPKYWNDA
421 ETFMPEFQ CSKDFVGNF EYLPFGGRR ICPGISFGLA NAYLPLAQLL YHFDWKLPA
481 IEPDDLDELTE LVGVTAARKS DLYLVATPYQ PPQK

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FIG. 108

NAME D87A-AF3
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 215

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1 GAAATGGGAA ATGCTCACAA CAGCAAAATT GCAGCAATCT GTTTGATAAT TTTCTTGGTA
61 TATAAAGCAT GGGAAATGTT GAAGTGGATA TGGATTAAGC CAAAGAAACT GGAGAGTTGC
121 CTCAGAAAAC AGGGACTCAA AGGAAATTCC TACAGGCTAT TCTATGGAGA TATGAAAGAA
181 TTGTCCAAAA GTCTCAAGGA AATCAATTCA AAGCCCATCA TCAATCTATC AAATGAAGTA
241 GCCCAGAGAA TCATTCTTTA TTATCTTGAA ATCATCCAAA AATATGGTAA AAGATGTTTT
301 GTTTGGCAAG GACCAACCCC CGCAATATTA ATAACAGAGC CAGAATTAAT AAAGGAGATA
361 TTTGGTAAGA ACTATGTTTT TCAGAAGCCT AATAATCCCA ACCCACTGAC CAAGTTATTG
421 GCTCGAGGTG TTGTAAGCTA CGAGGAAGAA AAATGGGCAA AACACAGAAA GATCTTAAAC
481 CCTGCCTTTC ATATGGAGAA GTTGAAGCAT ATGCTACCAG CATTTTACTT GAGCTGTAGT
541 GAGATGCTGA ACAAATGGGA GGAGATTATC CCAGTAAAAG AATCAAATGA GTTGGACATT
601 TGGCCTCATC TTCAAAGAAT GACAAAGTAT GTGATTTCTC GTGCTGCCTT TGGTAGTAGC
661 TACGAAGAAG GAAGAAGAAT ATTTGAACTT CAAGAAGAAC AAGCTGAGTA TCTAACGAAG
721 ACATTCAATT CAGTTTATAT CCCAGGTTCC AGATTTTTTC CCAATAAAAT GAACAAAAGA
781 ATGAAAGAAAT GTGAAAAGGA AGTACGAGAA ACAATTACGT GTCTAATTGA CAACAGATTA
841 AAGGCAAAAG AAGAAGGCAA TGGCAAGGCC CTCAATGATG ACCTACTGGG TATATTATTA
901 GAGTCAAATT CTATAGAAAT TGAAGAACAT GGTAACAAGA AGTTTGGAAAT GAGTATACCT
961 GAAGTAATTG AAGAGTGCAA ATTATTCTAT TTGCTGGCC AAGAGACTAC ATCAGTATTG
1021 CTTGTGTGGA CACTGATTTT GTTAGGGAGA AATCCAGAAT GGCAGGAACG TGCTAGAGAG
1081 GAAGTTTTTC AAGCCTTTGG AAGTGATAAA CCAACTTTTG ACGAATTATA TCGCTTGAAA
1141 ATTGTGACGA TGATTTTGTA CGAGTCTTTA AGGTTATATC CACCAATAGC AACTCGTACT
1201 CGAAGGACTA ATGAAGAAAC AAAATTAGGG GAACTAGATT TACCAAGGGG TGCCTGCTC
1261 TTTATACCAA CAATCTTATT ACATCTTGAC AAGGAAATTT GGGGTGAAGA TGCAGATGAG
1321 TTCAATCCGG AGAGATTTAG CGAAGGGGTG GCAAAGGCAA CAAAGGGGAA AATGACATAT
1381 TTTCCATTGG GTGCAGGACC GCGAAAATGC ATTGGGCAAA ACTTCGCGAT TTTGGAAGCA
1441 AAAATGGCTA TAGCTATGAT TCTACAACGC TTCTCCTTCG AGCTCTCTCC ATCTTATACA
1501 CACTCTCCAT ACATGTGGT CACTTTGAAA CCCAAATATG GTGCTCCCTC AATAATGCAC
1561 AGGCTGTAGT CCTGTGAGAA

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SEQ. ID. NO. 216

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1 MGNAHNSKIA AICLIIFLVY KAWELLKWIW IKPKKLESCL RKQGLKNSY RLFYGMKEL
61 SKSLKEINSK PIINLSNEVA PRIIPYYLEI IQKYGKRCFV WQGPTPAILI TEPELIKEIF
121 GKNYVFQKPN NPNPLTKLLA RGVVSYEEK WAKHRKILNP AFHMEKLKHM LPAFYLSCE
181 MLNKWEEIIP VKESNELDIW PHLQRMSTDV ISRAAFSSY EGRRIIFELQ EEQAEYLTKT
241 FNSVIYIPGR FFPNKMNMKR KECEKEVRET ITCLIDNRLK AKEEGNGKAL NDDLGLILE
301 SNSIEIEEHG NKKFGMSIPE VIEECKLFYF AGQETTSVLL VWTLLILGRN PEWQERAREE
361 VFQAFGSDKP TFDELYRLKI VTMIYESLR LYPPIATRTR RTNEETKLGE LDLPKGALLF
421 IPTILLHLDK EIWGEDADEF NPERFSEGVA KATKGKMTYF PFGAGPRKCI GQNFAILEAK
481 MAIAMILQRF SFELSPSYTH SPYTVVTLKP KYGAPLIMHR L

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FIG. 109

NAME D208-AC8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 217

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1 ATGCTTTCTC CCATAGAAGC CTTGTAGGA CTAGTAACCT TCACATTTCT CTTTACTTCT
61 CTATGGACAA AAAAATCTCA AAAACTTCCA AAACCCTTAC CACCGAAAAT CCCCGGAGGA
121 TGGCCCGTAA TCGGCCATCT TTTTCACTTC AATAACGACG GCGACGACCG TCCATTAGCT
181 CGAAAGCTCG GAGACTTAGC TGATAAATAC GGCCCCGTTT TCACTTTTCG GCTAGGTCTT
241 CCCCTTGTGC TAGTTGTAAAG CAGTTACGAA GCTATAAAAG ATTGCTTCTC TACAAAATGAT
301 GCCATTTTCT CCAATCGTCC AGCTCTTCTT TACGGCGAAT ACCTTGGCTA CAATAATACA
361 ATGCTTTTTC TAGCAAATTA CGGACCTTAC TGGCGAAAAA ATCGTAAAT AGTCATTCAG
421 GAAGTTCTCT CTGCTAGTCG TCTCGAAAAA TTCAAACAAG TGAGATTCAC CAGAATTCAA
481 ACGAGCATTG AGAATTTATA CACTCGAATT AATGGAAATT CGAGTACGAT AAATCTAACT
541 GATTGGTTAG AAGAATTGAA TTTTGGTCTG ATCGTGAAAA TGATCGCTGG GAAAAATTAT
601 GAATCCCGTA AAGGAGATGA ACAAGTGGAA AGATTAAAGA ATGCGTTTAA GGATTTTATG
661 GTTTTATCAA TGGAATTTGT ATTATGGGAT GCATTTCCTA TTCCATTATT TAAATGGGTG
721 GATTTTCAAG GTCATATTAA GGCAATGAAA AGGACATTTA AGGATATAGA TTCTGTTTTT
781 CAGAACTGGT TAGAGGAACA TATTAATAAA AGAGAAAAAA TAGAGGTTGG TGCAGAAAGG
841 AATGAACAAG ATTTTCATTGA TGTGGTGCCT TCAAAATTGA GTAAAGAATA TCTTGATGAA
901 GGTACTCTCT GTGATACTGT CATTAAAGCA ACAGTTTTTA GTTTGGTCTT GGATGCAGCA
961 GACACAGTTG CTCTTCACAT AAATTGGGGA ATGACATTAT TGATAAACAA TCAAAATGCC
1021 TTGATGAAAG CACAAGAAGA GATAGACACA AAAGTTGGTA AGGATAGATG GGTAGAAGAG
1081 AGTGATATTA AGGATTTAGT ATACCTCCAA GCTATTGTTA AAAAGGTGTT ACGATTATAT
1141 CCACCAGGAC CTTTGTAGT ACCACATGAA AATGTAAAGG ATTGTGTGTG TAGTGGATAT
1201 CACATTCCTA AAGGGACTAG ATTATTCGCA AACGTCATGA AACTGCAGCG CGATCCTAAA
1261 CTCTTGTCAT ATCCTGATAA GTTCGATCCA GAGAGATTCA TCGCTGGTGA TATTGACTTC
1321 CGTGGTCACC ACTATGAGTT TATCCCATTT GGTCTGGAA GACGATCTTG TCCGGGGATG
1381 ACTTATGCAT TGCAAGTGGG ACACCTAACA ATGGCACATT TAATCCAGGG TTTCAATTAC
1441 AAACTCCAA ATGACGAGGC CTTGGATATG AAGGAAGGTG CAGGCATAAC AATACGTAAG
1501 GTAAATCCAG TGAATTGAT AATAACGCCT CGCTTGGCAC CTGAGCTTTA CTAACACCTA
1561 AGATGTTTCA TCTTGGTTGA TCATTGT

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SEQ. ID. NO. 218

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1 MLSPIEAFVG LVTFTFLLYF LWTKKSQKLP KPLPPKIPGG WPVIGHLFHF NNDGDDRPLA
61 RKLGLDLADKY GPVFTFRLGL PLVLVVSSYE AIKDCFSTND AIFSNRPALL YGEYLYNNNT
121 MLFLANYGPY WRKNRKLVIQ EVLSASRLEK FKQVRFTRIQ TSIKNLYTRI NGNSSTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFKNAFKDFM VLSMEFVLWD AFPIPLFKWV
241 DFQGHKAMK RTFKDIDSVF QNWLEEHINK REKIEVGAEG NEQDFIDVVL SKLSKEYLDE
301 GYSRDTVIAK TVFSLVLDDA DTVALHINWG MTLINNNQNA LMKAEIEIDT KVGKDRWVEE
361 SDIKDLVYLQ AIVKKVLRLY PPGPLLVPHE NVKDCVVSgy HIPKGTRLF A NVMKLQRDPK
421 LLSNPDKFDP ERFIAGDIDF RGHHYEFIFP GSGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 KTNDEALDM KEGAGITIRK VNPVELIITP RLAPELY

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FIG. 110

NAME D215-AB5
ORGANISM NICOTIANA TABACUM

SEQ. ID. NO. 219

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1 GGGAGAAGGC CTTCAATATG GAGATACCAT ATTACAGCTT AAAAAATTGCA ATTTCTTCAT
61 TTGCAATTAT CTTTGTACTA AGATGGGCAT GGAAAATCTT GAATTATGTG TGGTTAAAAC
121 CAAAAGAATT GGAGAAATAC CTCAGACAGC AGGGTTTCAA AGGAAACTCT TACAAATTCT
181 TGTTCGGGGA TATGAAAGAG ACGAAGAAAA TGGGTGAAGA AGCTATGTCT AAGCCAAATCA
241 ATTTCTCTCA TGACATGATT TGGCCTAGAG TTATGCCATT CATCCACAAA ACCATCACCA
301 ATTATGGTAA GAATTGTATT GTGTGGTTTG GGCCAAGACC AGCAGTCCTG ATCACAGACC
361 CGGAACCTGT AAAGGAGGTG CTAACGAAGA ATTTCTGTCTA TCAGAAGCCG CTTGGCAATC
421 CACTCACAAA GTTGGCAGCA ACTGGAATTG CAGGCTATGA AACAGATAAA TGGGCTACAC
481 ATAGAAGGCT TCTCAATCCT GCTTTTCACC TTGACAAGTT GAAGCATATG CTACCTGCAT
541 TCCAATTATC TGCTAGTGAG ATGTTGAGCA AATTGGAGAA AGTTGTTTCA CCAAACGGAA
601 CAGAGATAGA TGTGTGGCCA TATTTACAAA CTTTGACAAG TGATGCCATT TCAAGAACTG
661 CGTTTGGAAG TAGTTATGAA GAAGGAAGAA AGATTTTGA CCTTCAAAAA GAACAACCTT
721 CACTAATTCT AGAAGTTTCA CGCACAAATAT ATATTCCAGG ATGGAGGTTT TTGCCAACGA
781 AAAGGAACAA AAGGATGAAG CAAATATTTA ATGAAGTACG AGCACTGGTA TTTGGAATTA
841 TTAAGAAAAG GATGAGTATG ATTGAAAATG GAGAAGCACC TGATGATTTA TTGGGAATAT
901 TATTGGCATC CAATTTAAAA GAAATCCAAC AACATGGAAA CAACAAGAAA TTTGGTATGA
961 GTATTGATGA GGTGATTGAA GAGTGTAAC TCTTCTATTT TGCTGGGCAA GAGACTACTT
1021 CATCTTTACT TGTATGGACT ATGATTTTGT TGTGCAAATA TCCTAATTGG CAAGATAAAG
1081 CTAGAGAAGA GGTTTTGCAA GTGTTTGGGA GTAGGGAAGT TGACTATGAC AAGTTGAATC
1141 AGCTAAAAAT AGTAACTATG ATCTTAAACG AGGTCTTAAG GTTGATATCCA GCAGGATATG
1201 TGATTAATCG AATGGTAAAC AAAGAAACAA AGTTAGGGAA TTTGTGTTTA CCAGCCGGCG
1261 TACAGCTCGT GTTACCAACA ATGTTGTTGC AACATGATAC TGAATATGCG GGAGATGATG
1321 CAATGGAGTT CAATCCAGAG AGATTTAGTG ATGGAATATC CAAAGCAACA AAAGGAAAAC
1381 TTGTGTTTTT TCCATTTAGT TGGGGTCCAA GAATATGTAT TGGGCAAAAT TTTGCTATGT
1441 TAGAGGCTAA AATGGCAATG GCTATGATTC TGAAAACCTA TGCATTTGAA CTCTCTCCAT
1501 CTTATGCTCA TGCTCCTCAT CCACTACTAC TTCAACCTCA ATATGGTGCT CAATTAATTT
1561 TGTACAAGTT GTAGATATGG TCAATCTGGA ACTTGTTATG GAACTTTTAT CATCGTAATC
1621 AACCATATTG AGGG

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SEQ. ID. NO. 220

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1 MEIPYYSLKI AISSFALFV LRWAWKILNY VWLKPKELEK YLRQQGFKN SYKFLFGDMK
61 ETKKMGEEAM SKPINFSDM IWPRVMPFIH KITNYGKNC IVWFGPRPAV LITDPELVKE
121 VLTKNFVYQK PLGNPLTKLA ATGIAGYETD KWATHRRLLN PAFHLDKLKH MLPAFOFTAS
181 EMLSKLEKVV SPNGTEIDVW PYLQTLTSDA ISRTAFGSSY BEGRKIFDLQ KEQLSLILEV
241 SRTIYIPGWR FLPTKRNRKM KQIFNEVRAL VFGIIKKRMS MIENGEAPDD LGIILLASNL
301 KEIQQHGNK KFGMSIDEVI EECKLFYFAG QETTSSLLVW TMILLCKYPN WQDKAREVL
361 QVFGSREVDY DKLNLQKIVT MILNEVLRLY PAGYVINRMV NKETKLGNLG LPAGVQLVLP
421 TMLLQHDTEI WGDDAMEFNP ERFSDGSKA TKGKLVFFFP SWGPRICIGQ NFAMLEAKMA
481 MAMILKTYAF ELSPSYAHAP HPLLQPQYG AQLILYKL

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FIG. 111

NAME D103-AH3
ORGANISM NICOTIANA TABACUM

SEQ. ID. NO. 221

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1 ATGGTTTTTTCC CCATAGAAGC CTTTGTAGGA CTAGTAACCT TCACATTTCT CTTTACTTTC
61 CTATGGACAA AAAAATCTCA AAAACTTCCA AAACCCCTAC CACCGAAAAT CCCCAGGAGGA
121 TGGCCGGTAA TCGGCCACCT TTTTCACTTC AATAACGACG GCGACGACCG TCCATTAGCT
181 CGAAAACCTCG GAGACTTAGC TGATAAATAC GGGCCCGTTT TCACTTTTTCG GCTAGGTCTT
241 CCCCTTGTGC TAGTTGTAAG CAGTTACGAA GCTACAAAAG ATTGCTTCTC TACAAATGAC
301 GCCATTTTCT CCAATCGTCC AGCTTTTCTT TACGGCGAAT ACCTTGGCTA CAATAATACA
361 ATGCTTTTTC TAGCAAATTA CGGACCTTAC TGGCGAAAAA ATCGTAAATT AGTCATTTCAG
421 GAAGTTCTCT CTGCTAGTCG TCTCGAAAAA TTCAAACAAG TGAGATTCAC CAGAATTCAA
481 ACGAGCATTG AGAATTATTA CACTCGAATT AATGGAAATT CGAGTACGAT AAATCTAACT
541 GATTGGTTAG AAGAATTGAA TTTTGGTCTG ATCGTGAAAA TGATCGCTGG GAAAAATTAT
601 GAATCCGGTA AAGGAGATGA ACAAGTGGAA AGATTTAAGA ATGCGTTTAA GGATTTTATG
661 GTTTTATCAA TGGAATTTGT ATTATGGGAT GCATTTCCAA TTCCATTATT TAAATGGGTG
721 GATTTTCAAG GTCATATTAA GACAATGAAA AGGACATTTA AGGATATAGA TTCTGTTTTT
781 CAGAACTGGT TAGAGGAACA TATTAATAAA AGAGAAAAAA TGGAGGTGGG TGCAGAAGGG
841 AATGAACAAG ATTTTCATTGA TGTGGTGCCT TCAAATTTGA GTAAAGAATA TCTTGATGAA
901 GGTACTCTC GTGATACTGT CATTAAAGCA ACAGTTTTTA GTTTGGTCTT GGATGCAGCA
961 GACACAGTTG CTCTTCACAT AAATTGGGGA ATGACATTAT TGATAAACAA TCAAAATGCC
1021 TTGATGAAAG CACAAGAAGA GATAGACACA AAAGTTGGTA AGGATAGATG GGTAGAAGAG
1081 AGTGATATTA AGGATTTAGT ATACCTCCAA GCTATTGTTA AAAAGGTGTT ACGATTATAT
1141 CCACCAGGAC CTTTGTAGT ACCACATGAA AATGTAAAGG ATTGTGTTGT TAGTGGATAT
1201 CACATTCCTA AAGGGACTAG ATTATTCGCA AACGTCATGA AACTGCAGCG CGATCCTAAA
1261 CTCTTGCTCA ATCCTGATAA GTTCGATCCA GAGAGATTCA TCGCTGGTGA TATTGACTTC
1321 CGTGGTCACC ACTATGAGTT TATCCCATCT GGTCTGGAA GACGATCTTG TCCGGGGATG
1381 ACTTATGCAT TGCAAGTGGG ACACCTAACA ATGGCACATT TAATCCAGGG TTTCAATTAC
1441 AAAACTCCAA ATGACGAGGT CTTGGATATG AAGGAAGGTG CAGGCATAAC AATACGTAAG
1501 GTAAATCCAG TGGAATTGAT AATAACGCCT CGCTTGGCAC CTGAGCTTTA CTAAACCTA
1561 AGATCTTTCA TCTTGGTTGA TCATTGTTTA ATA

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SEQ. ID. NO. 222

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1 MVEPIEAFVG LVTFTFLLYF LWTKKSQKLP KPLPPKIPGG WPVIGHLFHF NNDGDDRPLA
61 RKLGLDLADKY GPVFTFRLGL PLVLVVSSYE ATKDCFSTND AIFSNRPAPL YGEYLGYNNT
121 MLFLANYGPY WRNRKLVLIQ EVLSASRLEK FKQVRFTRIQ TSIKNLYTRI NGNSSTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFKNAFKDFM VLSMEFVLWD AFPIPLFKWV
241 DFQGHITMK RTFKDIDSVF QNWLEEHIK REKMEVGAEG NEQDFIDVVL SKLSKEYLDE
301 GYSRDTVIKA TVFSLVLDA DVALHINWG MTLINNNQNA LMKAQEEIDT KVGKDRWVEE
361 SDIKDLVYLQ AIVKKVLRLY PPGPLLVPHE NVKDCVVSgy HIPKGTRLF A NVMKLQRDPK
421 LLSNPKDFDP ERFIAGDIDF RGHHYEFIPS GSGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 KTPNDEVLD MKEGAGITIRK VNPVELIITP RLAPELY

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FIG. 112

NAME D208-AD9
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 223

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1 ATGCTTTCTC CCATAGAAGC CATTGTAGGA CTAGTAACCT TCACATTTCT CTCTCTCTTC
61 CTATGGACAA AAAATCTCA AAAACCTTCA AAACCTTAC CACCGAAAAT CCCC GGAGGA
121 TGGCCGGTAA TCGGCCATCT TTTCCACTTC AATGACGACG GCGACGACCG TCCATTAGCT
181 CGAAAACTCG GAGACTTAGC TGACAAATAC GGCCCCGTTT TCACTTTTCG GCTAGGCCTT
241 CCCCTTGCTC TAGTTGTAAG CAGTTACGAA GCTGTAAAAG ACTGTTTCTC CACAAATGAC
301 GCCATTTTTC CCAATCGTCC AGCTTTTCTT TACGGCGATT ACCTTGGCTA CAATAATGCC
361 ATGCTATTTT TGGCCAATTA CGGACCTTAC TGGCGAAAAA ATCGAAAATT AGTTATTACG
421 GAAGTTCTCT CCGCTAGTCG TCTCGAAAAA TTCAAACACG TGAGATTTCG AAGAATTCAA
481 GCGAGCATGA AGAATTTATA TACTCGAATT GATGGAAATT CGAGTACGAT AAATTTAACT
541 GATTGGTTAG AAGAATTGAA TTTTGGTCTG ATCGTGAAGA TGATCGCTGG AAAAAATAT
601 GAATCCGGTA AAGGAGATGA ACAAGTGGAG AGATTTAAGA AAGCGTTTAA GGATTTTATG
661 ATTTTATCAA TGGAGTTTGT GTTATGGGAT GCATTTCCAA TTCCATTATT TAAATGGGTG
721 GATTTTCAAG GGCATGTTAA GGCTATGAAA AGGACTTTTA AAGATATAGA TTCTGTTTTT
781 CAGAATTGGT TAGAGGAACA TATTAATAAA AGAGAAAAAA TGGAGGTTAA TGCAGAAGGG
841 AATGAACAAG ATTTTATTGA TGTGGTGCTT TCAAAAATGA GTAATGAATA TCTTGGTGAA
901 GGTTACTCTC GTGATACTGT CATTGAAGCA ACGGTGTTTA GTTTGGTCTT GGATGCAGCA
961 GACACAGTTG CTCTTCACAT AAATTGGGGA ATGGCATTAT TGATAAACAA TCAAAGGCC
1021 TTGACGAAAG CACAAGAAGA GATAGACACA AAAGTTTGTG AGGACAGATG GGTAGAAGAG
1081 AGTGATATTA AGGATTTGGT ATACCTCCAA GCTATTGTGA AAGAAGTGTT ACGATTATAT
1141 CCACCAGGAC CTTTGTTAGT ACCACACGAA AATGTAGAAG ATTGTGTGTG TAGTGGATAT
1201 CACATTCCTA AAGGGACAAG ATTATTCGCA AACGTCATGA AACTGCAACG TGATCCTAAA
1261 CTCTGGTCTG ATCCTGATAC TTTCGATCCA GAGAGATTCA TTGCTACTGA TATTGACTTT
1321 CGTGGTCAGT ACTATAAGTA TATCCCGTTT GGTCTGGAA GACGATCTTG TCCAGGGATG
1381 ACTTATGCAT TGCAAGTGGA ACACTTAACA ATGGCACATT TGATCCAAGG TTTCAATTAC
1441 AGAACTCCAA ATGACGAGCC CTTGGATATG AAGGAAGGTG CAGGCATAAC TATACGTAAG
1501 GTAAATCCTG TGGAACTGAT AATAGCGCCT CGCCTGGCAC CTGAGCTTTA TTAACACCTA
1561 AGATGTTTCA TCTTGGTTGA

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SEQ. ID. NO. 224

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1 MLSPIEIAVG LVTFTFLFFF LWTKKSQKPS KPLPPKIPGG WPVIGHLFHF NDDGDDRPLA
61 RKLGLDLADKY GPVFTFRLGL PLVLVVSSYE AVKDCFSTND AIFSNRPAFL YGDYLYNNNA
121 MLFLANYGPY WRKNRKLVIQ EVLSASRLEK FKHVRFARIQ ASMKNLYTRI DGNSSNTINLT
181 DWLEELNFGI IVKMIAGKNY ESGKGDEQVE RFKKAFKDFM ILSMEFVLWD AFPPIPLFKWV
241 DFQGHVKAMK RTFKDIDSVF QNWLEEHIK REKMEVNAEG NEQDFIDVVL SKMSNEYLGE
301 GYSRDTVIEA TVFSLVLDA DTVALHINWG MALLINNQKA LTKAQEEIDT KVCKDRWVEE
361 SDIKDLVYLQ AIVKEVLRLY PPGPLLVPHE NVEDCVVSGY HIPKGTRLFV NVMKLQRDPK
421 LWSDPDTFDP ERFIATDIDF RGQYKYIPIF GPGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 RTPNDEPLDM KEGAGITIRK VNPVELIAP RLAPELY

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FIG. 113

NAME D237-AD1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 225

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1 TTTTCATATAC CTTTAGTACT CTTGAAATTT TCAAATAATG GTTTATCTTC TTTCTCCCAT
61 AGAAGCCATT GTAGGATTG TAACCTTTTC ATTTCTATT TACTTTCTAT GGACCAAAAA
121 ACAATCAAAA ATCTTAAACC CACTACCTCC AAAAATCCCA GGTGGATGGC CAGTAATCGG
181 CCATCTCTTT TATTTCAAGA ACAATGGCGA TGAAGATCGC CATTTTTCTC AAAAATCTCG
241 TGACTTAGCT GACAAATATG GTCCCGTCTT CACTTTCCGG TTAGGGTTTC GCCGTTTCTT
301 GCGGGTGAGT AGTTATGAAG CTATGAAAGA ATGCTTCACT ACCAATGATA TCCATTTGCG
361 CGATCGGCCA TCTTTACTCT ACGGAGAATA CCTTTGCTAT AATAACGCCA TGCTTGCTGT
421 TGCCAAATAT GGCCCTTACT GGAAAAA TCGAAAGTTA GTCAATCAAG AAGTTCTCTC
481 CGTTAGTCGG CTCGAAAAAT TCAAACATGT TAGATTTTCT ATAATTCAGA AAAATATTAA
541 ACAATTGTAT AATTGTGATT CACCAATGGT GAAGATAAAC CTTAGTGATT GGATAGATAA
601 ATTGACATTC GACATCATTT TGAAATGGT TGTGGGAAG AACTATAATA ATGGACATGG
661 AGAAATACTC AAAGTTGCTT TTCAGAAATT CATGGTTCAA GCTATGGAGA TGGAGCTCTA
721 TGATGTTTTT CACATTTCCAT TTTTCAAGTG GTTGGATCTT ACAGGGAATA TTAAGGCTAT
781 GAAACAACT TTCAAAGACA TTGATAATAT TATCCAAGGT TGTTTAGATG AGCACATTAA
841 GAAGAGAGAA ACAAGGATG TTGGAGGTGA AAACGAACAA GATTTTATAG ATGTGGTGCT
901 TTCCAAGATG AGCGACGAAC ATCTTGGCGA GGGTTACTCT CATGACACAA CCATCAAAGC
961 AACTGTATTC ACTTTGGTCT TGGATGCAAC AGACACACTT GCACTTCATA TAAAGTGGGT
1021 AATGGCGTTA ATGATAAACA ATAAGCATGT CATGAAGAAA GCACAAGAAG AGATGGACAC
1081 AATTGTTGGT AGAGATAGAT GGGTAGAAGA GAGTGATATC AAGAATTTGG TGTATCTCCA
1141 AGCAATTGTC AAAGAAGTAT TACGATTACA TCCACCCGCA CCTTTGTCAG TGCAACACCT
1201 ATCTGTAGAA GATTGTGTTG TCAATGGGTA CCATATTCTT AAGGGGACTG CACTACTTAC
1261 CAATATTATG AAACACAGC GAGATCCTCA AACATGGCCA AATCTTGATA AATTGATCC
1321 AGAGAGATTC CTGACGACTC ATGCTACTAT TGACTACCGC GGGCAGCACT ATGAGTCGAT
1381 CCCCTTTGGT ACGGGGAGAC GAGCTTGTC CCGGATGAAT TATTCATTGC AAGTGGAAAC
1441 CCTTTCAATT GCTCATATGA TCCAAGGTTT CAGTTTTGCA ACTACGACCA ATGAGCCTTT
1501 GGATATGAAA CAAGGTGTGG GTTTAACTTT ACCAAAGAAG ACTGATGTTG AAGTGCTAAT
1561 TACACCTCGC CTTCTCTCTA CGCTTTATCA ATATTAAGAT GTTTTGTGTG CGGGATTCTG
1621 TCTGATCAAT CCTCAATG

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SEQ. ID. NO. 226

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1 MUYLLSPIEA IVGFVTFSL FYFLWTKQS KILNPLPPKI PGGWPVIGHL FYFKNGDED
61 RHFSQKLGDL ADKYGPVTF RLGFRRFLAV SSYEAMKECF TTNDIHFADR PSLLYGEYLC
121 YNNAMLAVAK YGPYWKNRK LVNQEVLSVS RLEKFKHVRF SIIQKNIKQL YNCDSPMVKI
181 NLSDWIDKLT FDIILKMVVG KYNNGHGEI LKVAFOKFMV QAMEMELYDV FHIPFFKWLD
241 LTGNIKAMKQ TFKDIDNIIQ GWLDEHIKKR ETKDVGGENE QDFIDVLSK MSDEHLGEGY
301 SHDTTIKATV FTLVLDATDT LALHIKWVMA LMINKHVMK KAQEEMDTIV GRDRWVEESD
361 IKNLVYLQAI VKEVLRHPP APLSVQHLSV EDCVVNGYHI PKGTALLTNI MKLQRDPQTW
421 PNPDKFDPER FLTTHATIDY RGQHYESIF GTGRRACPAM NYSLQVEHLS IAHHIQGFSE
481 ATTTNEPLDM KQGVGLTLPK KTDVEVLITP RLPPTLYQY

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FIG. 114

NAME D125-AF11
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 227

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1 CTTTTCTCC CCAAAAAAGA GCTCATTTCC CTTGTCCCA AAAATGGATC TTCTCTTACT
61 AGAGAAGACC TTAATTGGTC TCTTCTTTGC CATTTTAATC GCTATAATTG TCTCTAGACT
121 TCGTTCAAAG CGTTTTAAGC TTCCCCCAGG ACCAATCCCA GTACCAAGTTT TTGGTAATTG
181 GCTTCAAGTT GGTGATGATT TAAACCACAG AAATCTTACT GATTTTGCCA AAAAATTTGG
241 TGATCTTTTC TTGTTAAGAA TGGGCCAGCG TAATTTAGTT GTTGTGTCAT CTCCTGAATT
301 AGCTAAAGAA GTTTTACACA CACAAGGTGT TGAATTTGGT TCAAGAACAA GAAATGTTGT
361 ATTTGATATT TTTACTGGAA AAGGTCAAGA TATGGTTTTT ACTGTATATG GTGAACACTG
421 GAGAAAAATG AGGAGAATTA TGACTGTACC ATTTTTTACT AATAAAGTTG TGCAGCAATA
481 TAGAGGGGGG TGGGAGTTTG AAGTGGCAAG TGTAATTGAG GATGTGAAGA AAAATCCTGA
541 ATCTGCTACT AATGGGATTG TATTAAGGAG GAGATTACAA TTGATGATGT ATAATAATAT
601 GTTTAGGATT ATGTTTGATA GGAGATTTGA GAGTGAAGAT GATCCTTTGT TTGTTAAGCT
661 TAAGGCTTTG AATGGTGAAA GGAGTAGATT GGCTCAGAGT TTTGAGTATA ATTATGGTGA
721 TTTTATTCCC ATTTTGAGGC CTTTTTTGAG AGGTTATTTG AAGATCTGTA AAGAAGTTAA
781 GGAGAAGAGG CTGCAGCTTT TCAAAGATTA CTTTGTGTAT GAAAGAAAGA AGCTTTCAAA
841 TACCAAGAGC TTGGCAGACA ATGCTCTGAA ATGTGCGATT GATCACATTC TTGAGGCTCA
901 ACAGAAGGGG GAGATCAATG AGGACAACGT TCTTTACATT GTTGAAACAA TCAATGTTGC
961 TGCTATAGAA ACCACATTAT GGTCAATTGA GTGGGGTATC GCCGAGTTAG TCAACCACCC
1021 TCACATCCAA AAGAAACTCC GCGACGAGAT TGACACAGTT CTTGGCCAGG GAGTGCAAGT
1081 GACTGAACCA GACCCCCA AGCTTCCATA CCTTCAGGCT GTGATCAAGG AGACGCTTCG
1141 TCTCCGTATG GCAATTCCTC TATTAGTCCC ACACATGAAC CTTACAGATG CAAAGCTTGG
1201 CGGGTTTGAT ATTCCAGCAG AGAGCAAAAT CTTGGTTAAC GCTTGGTGGC TAGCTAACAA
1261 CCCGGCTCAT TGGGAAGAAAC CCGAAGAGTT CAGACCCGAG AGGTTCTTCG AAGAGGAGAA
1321 GCACGTTGAG GCCAATGGCA ATGACTTCAG ATATCTTCCG TTTGGCGTTG GTAGGAGGAG
1381 TTGCCTTGA ATTATACTTG CATTTGCCAT TCTTGGCATT ACTTTGGGAC GTTTGGTTCA
1441 GAACCTTGAG CTGTTGCCTC CTCCAGGCCA GTCGAAGCTC GACACCACAG AGAAAGGTGG
1501 ACAGTTTCAGT CTCCATATTT TGAAGCATTC CACCATTGTG TTGAAACCAA GGTCTTGCTG
1561 AACTTTCTGA TCCTAATCAA TTAAGGGGTT GAAGAAATTT TATAATTATG

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SEQ. ID. NO. 228

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1 MDLLLLLEKTL IGLFFAILIA IIVSRLRSKR FKLPPGPIPV PVFGNWLQVG DDLNHRNLTD
61 FAKKFGDLFL LRMGQRNLV VSSPELAKEV LHTQGVFEFGS RTRNVVFDIF TGKGQDMVFT
121 VYGEHWKMR RIMTVPFETN KVVQQYRGGW EFEVASVIED VKKNPESATN GIVLRRRLQL
181 MMYNNMFRIM FDRRFESEDD PLFVKLKLALN GERSRLAQSF EYNYGDFIPI LRFFLRGYLYK
241 ICKEVKEKRL QLFKDYFVDE RKKLSNTKSL DSNALKCAID HILEAQQKGE INEDNVLYIV
301 ENINVAAIET TLWSIEWGIA ELVNHPIQK KLRDEIDTVL GPGVQVTEPD THKLPYLQAV
361 IKETLRLRMA IPLLVPHMNL HDAKLGGFDI PAESKILVNA WWLANNPAHW KPPEEFRPER
421 FFEEEKHVEA NGNDFRYLPF GVGRRSCEPI ILALPILGIT LGRLVQNFEI LPPPGQSKLD
481 TTEKGQGFSL HILKHSTIVL KPRSC

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FIG. 115

NAME D134-AE11
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 229

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1 AACAAATAAAA ATGGAGACAT TATTTAACAT CAAAGTTGCA GTTTCATTAG TAATTGTGAT
61 AATTTTCTCTG AGATGGGTAT GGAAATTCCT GAATTGGGTG TGGATTCAAC CAAAGAAAAAT
121 GGAAGAAAAGA CTAAGAAATGG AAGGTTTCAA AGGAAGCTCA TATAAGCTAT TATTTGGAGA
181 TATGAAAGAA ATAAATACAA TGGTTGAAGA AGCCAAAACC AAGCCTATGA ATTTTACCAA
241 TGATTATGTG GCTAGAGTCT TGCCTCACTT CACAAAGTTG ATGCTCCAAT ATGGCAAGAA
301 TAGCTTTATG TGGTTAGGCT CAAAACCAAC AATGTTTATC ACAGACCCTG AACTAATAAG
361 GGAGATCTTG TCAAAAAGTT ACATATACCA GGAGATTCAA GGCAATCCAA TCACTAAGTT
421 GCTAGCACAA GGACTAGTAA GTTATGAAGC AGAGAAATGG GCTAAGCATA GAAAAATTAT
481 CAATCCTGCA TTTACCTTG ACAAGTTGAA GCATATGCTA CCATCATCTT ACTTGAGTTG
541 TTGTGACATG CTCAGAAAAT GGGAAAGTAT AGCTTCATCA GAGGGATCAG AAATAGACGT
601 GTGGCCTTTT CTGGAAACGT TGACAAGCGA TGCTATTTCA AGAACAGCTT TTGGTAGTAA
661 CTATGAAGAC GGGAGACAGA TATTTGAGCT TCAAAAAGAA CAAGCTGAGT TGATTTTACA
721 AGCAGCGCGA TGGCTTTACA TCCCCGGATG GAGGTTTGTG CCAACAAGA GGAACAAGAG
781 ATGAAGCAA ATCGCTAAG AAGTACGATC ATTAGTGTG GGAATAATCA ATAAGAGAAT
841 AAGGGAAATG AAAGCAGGGG AAGCTGCAAA AGATGACTTA CTGGGAATAC TATTGGAATC
901 TAATTTCAAA GAAATCCAAA TGCACGGAAA CAAGAACTTT GGCATGACTA TCGACGAAGT
961 GATTGAAGAG TGAAGTTAT TTTACTTTGC TGGGCAAGAA ACTACTTCAG TTTTGTCTGT
1021 TTGGACTTTG ATTTTACTGA GTAAGCATGT CGATTGGCAA GAAAGAGCTA GAGAAGAAGT
1081 TCATCAAGTC TTTGGAAAGT ACAAACCTGA TTATGACGCA TTGAATCAGT TGAAAGTTGT
1141 AACGATGATA TTCAACGAGG TTTTAAGGTT GTACCCACCG GGAATTACCA TAAGTCGAAC
1201 TGACACGAG GATACCAAAAT TAGGGAACTT GTCATTGCCA GCAGGGATAC AGCTTGTGTT
1261 ACCTGCAATT TGGTTGCATC ATGACAATGA AATATGGGGA GATGATGCAA AGGAGTTCAA
1321 ACCAGAGAGG TTTAGTGAAG GAGTTAATAA AGCAACAAAG GGTAAATTTG CATATTTTCC
1381 ATTTAGTTGG GGACCAAGAA TATGTGTTGG ACTGAATTTT GCAATGTTAG AGGCAAAAAT
1441 GGCACCTGCA TTGATTCTAC AACACTATGC TTTTGAGCTC TCTCCATCTT ATGCACATGC
1501 TCCTCATACA ATTATCACTC TGCAACCTCA ACATGGTGCT CCTTTGATT TGGCGAAGCT
1561 GTAGCGCGGA TATATTGATT GGTATCTAC TGTAG

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SEQ. ID. NO. 230

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1 METLFNIKVA VSLVIVIIFL RWVWKFLNWV WIQPKKMEKR LKMEGFKGSS YKLLFGDMKE
61 INTMVEEAKT KPMNFTNDYV ARVLPHFTEL MLQYGNSEFM WLGPKPTMFI TDPFLIREIL
121 SKSYIYQEIQ GNPITKLLAQ GLVSYEAEKW AKHRKIINPA FHLDKLKML PSFYLSCCDM
181 LRKWESIASS EGSEIDVWPF LETLTSDAIS RTAFGSNYED GRQIFELQKE QAEILILQAAAR
241 WLYIPGWRFV PTKRNKRKMQ IAKEVRSVLV GIINKRIREM KAGEAAKDDL LGILLESNFK
301 EIOMHGKNKF GMTIDEVIEE CKLFYFAGQE TTSVLLVWTL ILLSKHVDWQ ERAREEVHQQ
361 FGSNKPDPYDA LNQLKVVTMI FNEVLRLYPP GITISRTVHE DTKLGNLSLP AGIQLVLPAL
421 WLHHDNEIWG DDAKEFKPER FSEGVNKATK GKFAFYPPSW GPRICVGLNF AMLEAKMALA
481 LLLQHYAFEL SPSYAHAPHY IITLQPQHGA PLILRLK

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FIG. 116

NAME D209-AH12
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 231

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1 ATATGCAACT GAGATTTGAA GAATACCAAC TAACCAAAAT GCAGTTCCTC AGCTTGGTTT
61 CCATTTTCCCT ATTTCTATCT TTCCTCTTTT TGTAAAGGAT ATGGAAGAAC TCCAATAGCC
121 AAAGCAAAAA GTTGCCACCA GGTCCATGGA AACTACCAAT ACTAGGAAGT ATGCTTCATA
181 TGGTTGGTGG ACTACCACAC CATGTCCTTA GAGATTTAGC CAAAAAATAT GGACCACTTA
241 TGCACCTTCA ATTAGGTGAA GTTCTGCGG TTGTGGTTAC TTCTCCTGAT ACGGCAAAAG
301 AAGTATTAAA AACTCATGAC ATCGCTTTTG CGTCTAGGCC TAGCCTTTTG GCCCCGGAGA
361 TTGTCTGTTA CAATAGGTCT GATCTAGCCT TTGCCCCCTA TGGCGACTAT TGGAGACAAA
421 TGCCTAAAAT ATGTGCTTTG GAAGTGCTCA GTGCCAAGAA TGTTCCGGACA TTTAGCTCTA
481 TTAGGCGGAA TGAAGTTCTT CGTCTCATTA ATTTTATCCG GTCATCTTCT GGTGAACCTA
541 TTAATGTTAC GGAAGGATC TTTTGTTC CAAGCTCCAT GACATGTAGA TCAGCGTTTG
601 GCGAAGTGTT CAAAGAGCAA GACAAATTTA TACAATAAT TAAAGAAGTG ATACTCTTAG
661 CAGGAGGGTT TGATGTGGCT GACATATTCC CTTCACTGAA GTTCTTTCAT GTGCTCAGTG
721 GAATGAAGGG TAAGATTATG AATGCACACC ATAAGGTAGA TGCCATTGTT GAGAATGTCA
781 TCAATGAGCA CAAGAAAAAT CTTGCAATTG GGAATACTA TGGAGCGTTA GGAGGTGAAG
841 ATTTAATTGA TGTTCTTCTA AGACTTATGA ATGATGGAGG CCTTCAATTT CCTATCACC
901 ACGACAACAT CAAAGCCATA ATTTTGTACA TGTTTGTGCG CGGGACAGAG ACTTCATCGT
961 CAACAATTGT GTGGGCTATG GTAGAAATGG TGAATAATCC AGCCGTATTG GCGAAAGCTC
1021 AAGCAGAAGT AAGAGAAGCA TTTAGAGGAA AAGAACTTT CGATGAAAT GATGTGGAGG
1081 AGCTAAACTA CCTAAAGTTA GTAATAAAAG AAACCTAAG ACTTCATCCA CCGGTTCCAC
1141 TTTTGCTCCC AAGAGAATGT AGGGAAGAGA CAAATATAAA CGGCTACACT ATTCCTGTAA
1201 AGACCAAAGT CATGGTTAAT GTTTGGGCTT TGGGAAGAGA TCCAAAATAT TGAATGACG
1261 CAGAACTTTT TATGCCAGAG AGATTTGAGC AGTGCTCTAA GGATTTGTTT GGTAAATATT
1321 TTGAATATCT TCCATTTGGT GCGGGAAGGA GGATTTGTCC TGGGATTTCC TTTGGCTTAG
1381 CTAATGCTTA TTTGCCATTG GCTCAATTAC TATATCACTT CGATTGGAAA CTCCTGCTG
1441 GAATCGAACC AAGCGACTTG GACTTGACTG AGTTGGTTGG AGTAACCTGCC GCTAGAAAAA
1501 GTGACCTTTA CTTGGTTGCG ACTCCTTATC AACCTCCTCA AAAGTGATTT AATGGTTTCA
1561 AGTTTTTATT TCCTAGCAAA CCCCACTATT GTCCTATCTT TCTTTTGGTG TTTTCGGTTT
1621 TATCTACTCT AATACATGCA TCTTTTACCA TATAGGAATG TACCATGTTG TCG

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SEQ. ID. NO. 232

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1 MQLRFEEYQL TKMQFFSLVS IFLFLSFLFL LRIWKNSNSQ SKKLPPGPWK LPILGSM LHM
61 VGLPHHVLRL DLAKKYGPLM HLQLGEVSAV VVTSPTD TAKE VLKTHDIAFA SRPSLLAPEI
121 VCYNRSDLAFC PYGYDWRQM RKICVLEVL AKNVRTFSSI RRNEVLR LIN FIRSSSGEPI
181 NVTERIFLFT SSMTCRSAFG QVFKEQDKFI QLIKEVILLA GGFVDVADIFP SLKFLHVLSG
241 MKGKIMNAHH KVDAIVENVI NEHKKNLAIK KTNALGGED LIDVLLRLMN DGLQFPITN
301 DNIKAIIFDM FAAGTETSSS TIVWAMVEMV KNPAVFAKAQ AEVREAFRGK ETFDENDVEE
361 LNYLKLVIKE TLRLLHPVPL LLPRECREET NINGYIIPVK TKVMNVWVAL GRDPKYWNDA
421 ETFMPEFEQ CSKDFVGNF EYLPFGGRR ICPGISFGLA NAYLPLAQLL YHFDWKLFPAG
481 IEPDDLDELTE LVGVTAARKS DLYLVATPYQ PPQK

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FIG. 117

NAME D221-BB8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 233

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1 GAATTATTTT ACCTGTTGTA TTCCTTGTCT ATGATAGGAA GCTCGTTACC TCACGCTACA
61 AACCCCAAAT AAAAAATGAA TTTCCTTGTG GTGTTAGCTT CTCTCTTTCT CTTTGTGTTT
121 CTAATGAGGA TAAGCAAAGC AAAAAAGCTC CCTCCAGGTC CAAGGAAACT GCCTATAATA
181 GGAACCTTTC ATCAAATTGG AAAATTACCT CATCGTTCAC TTCAAAAACT TTCTAATGAA
241 TATGGGGATT TCATTTTCTT GCAATTAGGT TCTGTACCGA CTGTGGTTGT CTCCTCAGCT
301 GACATTGCCC GAGAGATCTT TAGAACTCAC GACCTTGTTT TCTCAGGCCG TCCTGCTTTA
361 TATGCTGCCA GAAAACTTTC CTACAATTGC TACAACGTTT CATTTGCACC CTATGGTAAT
421 TACTGGAGAG AGGCTCGGAA AATTCTAGTG TTGGAGTTGC TAAGTACAAA GAGAGTACAA
481 AGTTTCGAGG CAATTCGAGA CGAGGAAGTA AGTAGCTTGG TTCAAATTAT CTGTAGTTCC
541 TTGAGCTCAC CTGTTAACAT AAGCACATTA GCACTATCCT TGGCAAATAA CGTTGTTTGT
601 CGAGTGGCTT TTGGGAAAGG GAGTGCTGAA GGAGGAAATG ATTATGAGGA TAGGAAGTTT
661 AATGAAATTC TATATGAGAC ACAAGAATTA TTGGGTGAGT TTAACGTTGC TGATTATTTT
721 CCTCGGATGG CATGGATTAA CAAAAATAAT GGGTTTGATG AACGATTGGA AAATAATTTT
781 AGGGAATTGG ATAAGTTTTA TGACAAAGTA ATAGAAGATC ATCTTAATTC ATGTAGCTGG
841 ATGAAACAAA GGGATGATGA AGACGTTATT GATGTATTGC TTCGAATTCA AAAGGATCCA
901 AGCCAAGAAA TTCCTCTCAA AGATGATCAC ATTAAGGGCC TTCTTGCGGA TATATTCATA
961 GCTGGAAC TGACATCATC AACCAACCATA GAATGGGCAA TGTCAGAACT CATAAAAAAT
1021 CCAAGAGTCT TGAGAAAAGC TCAAGAGGAA GTTAGAGAAG TTTCTAAGGG AAAACAAAAG
1081 TGCCAAGAAA GTGATCTTTG CAAACTAGAT TACTTGAAAT TGGTCATCAA AGAAACCTTT
1141 AGACTACACC CACCAGTCCC ATTACTAGTC CCTCGAGTAA CAACAGCCAG CTGCAAAATA
1201 ATGGAATACG AAATTCAGT AAATACAAGA GTCTTCATCA ACGCGACAGC AAATGGGACA
1261 AATCCAAAT ACTGGGAAAA TCCATTGACA TTCTTGCCAG AGAGATTCTT GGATAAGGAG
1321 ATTGATTACA GAGGCAAAAA TTTTGAGTTG TTGCCATTG GGGCAGGGAG AAGAGGGTGT
1381 CCAGGAATTA ATTTTCAAT ACCACTTGTG GAGCTTGAC TTGTAATCT ATTGTTTCAT
1441 TATAATTGGT CACTTCTCTGA AGGGATGCTA GCTAAGGATG TTGATATGGA AGAAGCTTTG
1501 GGGATTACCA TGCACAAGAA ATCTCCCCTT TGCTTAGTAG CTTCTCATTA TACTTGTGTA
1561 GATTTTAAAA GATTTTAGCA TAGCTATATA TAGCTTGAAG T

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SEQ. ID. NO. 234

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1 MNFLVVLASL FLFVFLMRIS KAKKLPPGPR KLPIIGNLHQ IGKLPHRSLQ KLSNEYGDFI
61 FLQLGSVPTV VVSSADIARE IFRTHDLVFS GRPALYAARK LSYNCYNVSF APYGNWREA
121 RKILVLELLS TKRVQSFEAI RDEEVSSLVQ IICSSLSPV NISTLALS LA NNVVCRVAFG
181 KGSABEGNDY EDRKFNEILY ETQELLGEFN VADYFPRMAW INKINGFDER LENNFRELDK
241 FYDKVIEDHL NSCSWMKQRD DEDVIDVLLR IQKDPSQEI LKDDHIKGLL ADIFIAGTDT
301 SSTTIEWAMS ELIKNPRVLR KAQEEVREVS KGKQKVQESD LCKLDYLLKV IKETFRLHPP
361 VPLLVPRTVT ASCKIMEYEI PVNTRVFINA TANGTNPKYW ENPLTFLPER FLDKEIDYRG
421 KNFELLPFGA GRRGCPGINF SIPLVELALA NLLFHYNWSL PEGMLAKDVD MEEALGITMH
481 KKSPLCLVAS HYTC

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FIG. 118

NAME D222-BH4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 235

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1 CAAAGACTAA AAGATGTCGG TCTTTGCGGT TATTTTCATTC TTCTACTTTC TGTTTTTTCT
61 TTTCAAATCA TATTTGCCCT CATCGAAAAC AAAGAAAAAT TCTCCACCAT CTCCTTCAAA
121 GCTTCCGTTA ATCGGTCACT TCCACAAACT AGGCTTACAA CCTCACCGET CTCTACAAAA
181 ACTATCAAAT GAACATGGTC CCATGATGAT GCTTCAATTC GGTAGCGTAC CTGTGCTTAT
241 CGCTTCATCA GCTGAAGTCG CTTCCGAAAT CATGAAAACC CAAGATTGTG CTTTTGCAAA
301 CAAACCCATT TCAACCATTC CTAGCAAGCT TTTCTTCGGC CCAAGGACG TTGCTTCAC
361 CCCATATGGG GATTACTGGA GGAATGCCAG AAGCATTTGC ATGCTTCAGC TTTTGAACAA
421 CAAAAGAGTC CAGTCTTTTC GAAAGATAAG GGAAGAAGAG ACTTCTCTTC TTCTCCAGAG
481 GATTAGGGAA TCGCCAAATT CAGAAGTCGA TTTAACGGAG CTGTTCTGTT CCATGACTAA
541 CGACATAGTT TGCAGGTTGG CCTTAGGAAG GAAGTATTGT GATGGGGAAG AAGGGAGGAA
601 ATTCAAGTCT TTGCTGTTAG AGTTTGTGGA ATTGTTGGGA GTTTTTAACA TTGGAGATTA
661 CATGCCGTGG CTTGCATGGA TGAATCGTTT CAATGGTTTG AATGCCAAAG TGGATAAAGT
721 GGCAGAAAGAG TTTGATGCAT TTTTGGAGGA TGTGATTGAG GAACACGGAG GAAATAAGAA
781 ATCAGACACT GAAGCTGAAG GGGCAGACTT CGTGGATATA TTATTGCAGG TTCACAAAGA
841 AAACAAGGCT GGTTTTCAAG TCGAAATGGA TGCAATCAAA GCTATTATCA TGGATATGTT
901 TGCTGCCGGA ACAGATACAA CTTCCACGCT TCTAGAGTGG ACAATGAACG AGCTCTTAAG
961 AAATCCAAAA ACATTGAATA AGTTGAGAGA TGAGGTGAGA CAAGTGACTC AAGGGAAGAC
1021 AGAGGTAACA GAGGATGACT TAGAGAAAAT GCCGTATTTA AGAGCAGCAG TTAAGGAGAG
1081 TTCCAGGCTA CACTCTCCAG TGCCACTTCT ACCTCGAGAA GCAATTAAGG ATGCAAAGGT
1141 TTTGGGCTAC GATATAGCTG CAGGGACTCA AGTCCTCGTT TGTCCATGGG CAATCTCAAG
1201 AGATCCAAAC CTTTGGGAAA ATCCAGAGGA GTTTCACCTT GAAAGATTCT TGGATACTTC
1261 CATAGATTAC AAAGGCTTAC ATTTTCGAGT AATTCCATTC GGTGCAGGTC GGAGGGGTTG
1321 CCCTGGCATC ACATTGCTA AGTTTGTGAA TGAGCTAGCA TTGGCAAGAT TAATGTTCCT
1381 TTTTGATTTC TCGCTACCAA AAGGAGTTAA GCATGAGGAT TTGGACGTGG AGGAAGCTGC
1441 TGGAAATTACT GTTAGAAGGA AGTTCCCCCT TTTAGCCGCT GCCACTCCAT GCTCGTGATT
1501 TTTATTTTAG AGCTCATTCT ATGCCTTAAA AACTACTACT AGATAACTGC GTAGTAAATA
1561 ATGCTTGGTA

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SEQ. ID. NO. 236

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1 MSVFAVISFF LLLFFLEKSY LPSSKTKKNS PPSPSKLPLI GHFHLGLQP HRSLOKLSNE
61 HGPMMMLQFG SVPVLIASSA EAASEIMKTQ DLSFANKPIS TIPSKLFFGP KDVAFTPYGD
121 YWRNARSICM LQLLNNKRVQ SFRKIREEET SLLQRIRES PNSEVDLTEL FVSMNTDIVC
181 RVALGRKYCD GEEGRKFESL LLEFVELLGV FNIGDYPWL AWMNRFNGLN AKVDKVAKEF
241 DAFLEDVIEE HGGNKKSDTE AEGADFVDIL LQVHKNKAG FQVEMDAIKA IIMDMFAAGT
301 DTTSTLLEWT MNELLRNPKT LNKLRDEVRO VTQKTEVTE DDLEKMPYLR AAVKESRLH
361 SPVPLLPREA IKDAKVLGYD IAAGTQVLVC PWAISRDPNL WENPEEFQPE RFLDTSIDYK
421 GLHFELIPFG AGRRGCPGIT FAKFVNELAL ARLMFHDFDS LPKGVKHEDL DVEEAAGITV
481 RRFKPLLA TPCS

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FIG. 119

NAME D224-AF10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 237

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1 ATTATCCATC ACCTAAATG GAGAATTCTT GGGTTTTTCT AGCCTTGCCA GGGCTATCTG
61 CATTAGCTTT TCTCTGTAAA ATAATCACCT GTCGAAGACC GGTAAACCGG AAAATACCAC
121 CAGGTCCAAA ACCATGGCCC ATCATTTGGCA ATTTGAACCT ACTTGGTCCT ATACCACATC
181 AATCTTTTGA CTTGCTTTCC AAAAAATATG GAGAGTTGAT GCTGCTGAAA TTTGGCTCCA
241 GGCCAGTTCT TGTGTCTTCA TCTGCTGAAA TGGCAAAACA GTTTTAAAAA GTACATGATG
301 CTAATTTTCG CTCCCGTCTT ATGCTAGCTG GTGGAAAAGTA TACAAGCTAT AACTATTGTG
361 ACATGACATG GGCACCCAT GGTCCCTATT GGCGCCAAGC ACGACGAATT TACCTTAACC
421 AGATATTTAC TCCGAAAAGG CTAGACTCGT TCGAGTACAT TCGTGTGAA GAAAGGCAGG
481 CCTTGATTTC CCAGCTGAAT TCCCTTGCTG GAAAGCCATT TTTTCTCAA GACCATTGTG
541 CGCGATTTAG CCTCTGCAGC ATGACAAGGA TGGTTTTGAG CAACAAGTAC TTTGGTGAAT
601 CAACAGTTAG AGTAGAAGAT TTGCAGTACC TGGTAGATCA ATGGTCTTAA CTTAATGGTG
661 CTTTCAACAT TGGAGATTGG ATTCCATGGC TCAGCTTCTT GGACCTACAA GGCTATGTGA
721 AACAAATGAA GGCTTTGAAA AGAACTTTTG ATAAGTTCCA CAACATTGTG CTAGATGATC
781 GCAGGGCTAA GAAGAATGCA GAGAAGAACT TTGTCCCAAA AGACATGGTT GATGCTCTGT
841 TGAAGATGGC TGAAGATCCT AATCTGGAAG TCAAACCTAC TAATGACTGT GTCAAAAGGT
901 TAATGCAGGA TTTACTAACT GGAGGAACAG ATAGCTTAAC AGCAGCAGTG CAATGGGCAT
961 TTCAAGAACT TCTTAGACGG CCAAGGGTTA TTGAGAAGGC AACCGAAGAG CTTGACCGGA
1021 TTGTCGGGAA AGAGAGATGG GTAGAAGAGA AAGATTGCTC GCAGCTATCT TACGTTGAAG
1081 CAATCCTCAA GGAAACACTA AGGTTACATC CTCTAGGAAC TATGCTAGCA CCGCATTGTG
1141 CTATAGAAGA TTGTAACGTG GCTGGTTATG ACATACAGAA AGGAACGACC GTTCTGGTGA
1201 ATGTTTGGAC CATTGGAAGG GACCCAAAAT ACTGGGATAG AGCACAAGAG TTTCTCCCCG
1261 AGAGATTCTT AGAGAACGAC ATTGATATGG ACGGACATAA CTTTGCTTTC TTGCCATTG
1321 GCTCGGGGCG AAGGAGGTGC CCTGGCTATA GCCTTGGACT TAAGGTTATC CGAGTAACAT
1381 TAGCCAACAT GTTGCATGGA TTCAACTGGA AATTACCTGA AGGTATGAAG CCAGAAGATA
1441 TAAGTGTGGA AGAACATTAT GGGCTCACTA CACATCCTAA GTTTCCTGTT CCGTGATCT
1501 TGGAACTTAG ACTTCTTCA GATCTCTATT CCCCACAC TTAATCCTAA GTGCTCCTA
1561 TTATAGCATC ATATCAATAT CCCTC

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SEQ. ID. NO. 238

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1 MENSWFALAL AGLSALAFLC KIITCRRPVN RKIPPGPKPW PIIGNLNLG PIPHQSFDDL
61 SKKYGELMLL KFGSRPVLVA SSAEMAKQFL KVHDANFASR PMLAGGKYTS YNYCDMTWAP
121 YGPYWRQARR IYLNQIFTPK RLDSFEYIRV EERQALISQL NSLAGKPFPL KDHLRSRFLC
181 SMTRMVLSNK YFGESTVRVE DLQYLVQWFF LLNGAFNIGD WIPWLSFLDL QGYVKQMKAL
241 KRFTDFKHNI VLDDRRRAKN AEKNFVPKDM VDVLLKMAED PNLEVKLNTD CVKGLMQDLL
301 TGGTDSLTAQ VQWAFQELLR RPRVIEKATE ELDRIVGKER WVEEKDCSQL SVVEAILKET
361 LRLHPLGTML APHCAIEDCN VAGYDIQKGT TVLVNVWTIG RDPKYWDRAQ EFLPERFLEN
421 DIDMDGHNFA FLFPFGSGRRR CPGYSLGLKV IRVTLANMLH GFNWKLPEGM KPEDISVEEH
481 YGLTTHPKFP VPVILESRLS SDLYSPIT

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FIG. 120

NAME D224-BD11
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 239

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1 CTCATTATCC ATCACCTAAA ATGGAGAATT CTTGGGTTTT TCTAGCCTTG GCAGGGCTAT
61 CTGCATTAGC TTTTCTCTGT AAAATAATCA CCTGTCGAAG ACCGGTTAAC CGGAAAATAC
121 CACCAGGTCC AAAACCATGG CCCATCATTT GCAATTTGAA CCTACTTGTT CCTATACCAC
181 ATCAATCTTT TGA CTGCTT TCCAAAAAAT ATGGAGAGTT GATGCTGCTG AAATTTGGCT
241 CCAGGCCAGT TCTTGTGCT TCATCTGCTG AAATGGCAAA ACAGTTTTTA AAAGTACATG
301 ATGCTAATTT CGCTCCCGT CCTATGCTAG CTGGTGGAAA GTATACAAGC TATACTATT
361 GTGACATGAC ATGGGCACCC TATGGTCCCT ATTGGCGCCA AGCACGACGA CGAATTTACC
421 TTAACCAGAT ATTTACTCCG AAAAGGCTAG ACTCGTTCGA GTACATTCGT GTTGAAGAAA
481 GGCAGGCCTT GATTTCCAG CTGAATTCCC TTGCTGGAAA GCCATTTTTT CTCAAAGACC
541 ATTTGTGCGG ATTTAGCCTC TGCAGCATGA CAAGGATGGT TTTGAGCAAC AAGTATTTTG
601 GTGAATCAAC AGTTAGAGTA GAAAGATTTG AGTACCTGGT AGATCAATGG TTCTTACTTA
661 ATGGTGCTTT CAACATTGGA GATTGGATTC CATGGCTCAG CTTCTTGGAC CTACAAGGCT
721 ATGTGAACAA AATGAAGGCT TTGAAAAGAA CTTTTGATAA GTTCCACAAC ATTGTGCTAG
781 ATGATCACAG GGCTAAGAAG AATGCAGAGA AGAATTTTGT CCCAAAAGAC ATGGTTGATG
841 TCTTGTGTA GATGGCTGAA GATCCTAATC TGGAAAGTCAA ACTCACTAAT GACTGTGTCA
901 AAGGGTTAAT GCAGGATTTA CTAAGTGGAG GAACAGATAG CTTAACAGCA GCAGTGCAT
961 GGGCATTTC AAGACTTCTT AGACAGCCAA GGGTTATTGA GAAGGCCAAC GAAGAGCTTG
1021 ACCGGATTGT CGGGAAGAG AGATGGGTAG AAGAGAAAGA TTGCTCGCAG CTATCTTACG
1081 TTGAAGCAAT CCTCAAGGAA AACTAAGGT TACATCCTCT AGGAACTATG CTAGCACCAG
1141 ATTTGTGCTAT AGAAGATTGT AACGTGGCTG GTTATGACAT ACAGAAAGGA ACGACCGTTC
1201 TGGTGAATGT TTGGACCATT GGAAGGGACC CAAAATACTG GGATAGAGCA CAAGAGTTTC
1261 TCCCCGAGAG ATCTTAGAG AACGACATTG ATATGGACGG ACATAACTTT GCTTTCTTGC
1321 CATTGTGGCTC GGGGCGAAGG AGGTGCCCTG GCTATAGCCT TGGACTTAAG GTTATCCGAG
1381 TAACATTAGC CAACATGTTG CATGGATTCA ACTGGAAATT ACCTGAAGGT ATGAAGCCAG
1441 AAGATATAAG TGTGGAAGAA CATTATGGGC TCACTACACA TCCTAAGTTT CCTGTTCCTG
1501 TGATCTTGA ATCTAGACTT TCTTCAGATC TCTATTCCTC CATCACTTAA TCCTAAGTGC
1561 TTCCTATTAT AGCATCATAT CAATATCCCT C

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SEQ. ID. NO. 240

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1 MENSWVFLAL AGLSALAFLC KIITCRRFPV RKIPPGPKPW PIIGNLNLG PIPHQSFDDL
61 SKKYGELMLL KFGSRPVLVA SSAEMAKQFL KVHDANFASR PMLAGGKYTS YNYCDMTWAP
121 YGPYWRQARR RIYLNQIFTP KRLDSFEYIR VEERQALISQ LNSLAGKPFF LKDHLSRFSL
181 CSMTRMVLNS KYFGESTVRV EDLQYLVDQW FLLNGAFNIG DWIPWLSFLD LQGYVKQMK
241 LKRTFDKFHN IVDLDDHRAK NAEKNFVPEK MVDVLLKMAE DPNLEVKL TN DCVKGLMQDL
301 LTGGTDSLTA AVQWAFQELL RQPRVIEKAT EELDRIVGKE RWVEEKDCSQ LSYVEAILKE
361 TLRHLPLGTM LAPHCAIEDC NVAGYDIQKG TTVLVNVWTI GRDPKYWDRA QEFLEPERFLE
421 NDIDMDGHNF AFLFFGSGRR RCPGYSLGLK VIRVTLANML HGFNWKLP EG MKPEDISVEE
481 HYGLTTHPKF PVPVILESRL SSDLYSPIT

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FIG. 121

NAME D228-AD7
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 241

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1  TGATAATGCT CTTTCTACTC TTTGTAGCCC TTCCTTTCAT TCTTATTTTT CTTCTTCCTA
61 AATTCAAAAA TGGTGGAAT AACAGATTGC CACCAGGTCC TATAGGTTTA CCATTCATTG
121 GAAATTTGCA TCAATACGAT AGTATAACTC CTCATATCTA TTTTGGAAA CTTTCAAAAA
181 AATATGGCAA AATCTTCTCA TTAAGACTTG CTTCTACTAA TGTGGTAGTA GTTCTTCAG
241 CAAATTAGC AAAAGAAGTA TTGAAAAAAC AAGATTAAAT ATTTTGTAGT AGACCATCTA
301 TTCTTGGCCA AAAAAAATG TCTTATTATG GTCGTGATAT TGCTTTTAAT GATTATTGGA
361 GAGAAATGAG AAAAATTTGT GTTCTTCATC TTTTGTAGTT AAAAAAGTT CAATTATTTA
421 GTCCAATTCG TGAAGATGAA GTTTTGTAGT TGATTAGAA AATATCAAAA CAAGCTTCTA
481 CTTCAAAAT TATTAATTTG AGTAATTTAA TGATTTCATT AACAAGTACA ATTATTTGTA
541 GAGTTGCTTT TGGTGTTAGG ATTGAAGAAG AAGCACATGC AAGGAAGAGA TTTGATTTTC
601 TTTTGGCCGA GGCACAAGAA ATGATGGCTA GTTCTTTGT ATCTGATTTT TTTCCCTTTT
661 TAAGTTGGAT TGATAAATTA AGTGGATTGA CATATAGACT TGAGAGGAAT TTCAAGGATT
721 TGGATAATTT TTATGAAGAA CTCATTGAGC AACATCAAAA TCCTAATAAG CCAAAATATA
781 TGGAAGGAGA TATTGTTGAT CTTTGTCTAC AATTGAAGAA AGAGAAATTA ACACCACTTG
841 ATCTCACTAT GGAAGATATA AAAGGAATTC TCATGAATGT GTTAGTTGCA GGATCAGACA
901 CTAGTGCAGC TGCTACTGTT TGGGCAATGA CAGCCTTGAT AAAGAATCCT AAAGCCATGG
961 AAAAAGTTCA ATTAGAAATC AGAAAATCAG TTGGGAAGAA AGGCATTGTA AATGAAGAAG
1021 ATGTCCAAA CATCCCTTAT TTAAAGCAG TGATAAGGA AATATTTAGA TTGTATCCAC
1081 CAGCTCCACT TTTAGTTCCA AGAGAATCAA TGGAAAAAAC CATATTAGAA GGTATGAAA
1141 TTCGGCCAAG AACCATAGTT CATGTTAACG CTTGGGCTAT AGCAAGGGAT CCTGAAATAT
1201 GGGAAATCC AGATGAATTT ATACCTGAGA GATTTTGA TAGCAGTATC GATTACAAGG
1261 GTCAAGATTT TGAGTTACTT CCATTGGGT CAGGCAGAAG AGGTTGCCCA GGTATTGCAC
1321 TTGGGGTTGC ATCCATGGAA CTTGCTTGT CAAATCTTCT TTATGCATTT GATTGGGAGT
1381 TGCCTTATGG AGTAAAAAAA GAAGACATCG ACACAAACGT TAGGCCTGGA ATTGCCATGC
1441 ACAAGAAAAA CGAATTTTGC CTTGTCCAA AAAATTATTT ATAAATTATA TTGGGACGTG
1501 GATCTCATGC TAGTTCTGTG CGGTCAGCTA AGCTTATTAT TTTTGGCTCA AATTATGTAT
1561 ACATAATTAG TACATGTTTA AAATGTATAA ATATAGTAGA ACCATTCTCA TGGTT

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SEQ. ID. NO. 242

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1  MLFLLFVALP FILIFLLPKF KNGGNNRLPP GPIGLPFIGN LHQYDSITPH IYFWKLSKKY
61 GKIFSLKLAS TNVVVVSSAK LAKEVLKKQD LIFCSRPSIL GQOKLSYYGR DIAFNQYWRE
121 MRKICVLHLF SLKKVQLFSP IREDEVFRMI KKISKQASTS QIINLSNLM SLTSTIICRV
181 AFGVRIIEEA HARKRFDFLL AEAQEMMASF FVSDFFPFLS WIDKLSGLTY RLERNFKDLD
241 NFYEELIEQH QPNPKPKYME GDIVDLLQL KKEKLTPLDL TMEDIKILM NVLVAGSDTS
301 AAATVWAMTA LIKNPKAMEK VQLEIRKSVG KKGIVNEEDV QNIPYFKAVI KEIFRLYPFA
361 PLLVPRESME KTILEGYEUR PRTIVHVNWA AIARDPEIWE NPDEFIPERF LNSSIDYKQG
421 DFELLFPFAG RRGCPGIALG VASMELALSN LLYAFDWELP YGVKKEDIDT NVRPGIAMHK
481 KNELCLVPKN YL

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FIG. 122

NAME D228-AH8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 243

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1 TGATAATGCT CTTTCTACTC TTTGTAGCCC TTCCTTTCAT TCTTATTTTT CTTCTTCCTA
61 AATTCAAAAA TGGTGGAAAT AACAGATTGC CACCAGGTCC TATAGGTTTA CCATTCATTG
121 GAAATTTGCA TCAATATGAT AGTATACTC CTCATATCTA TTTTGGGAAA CTTTCCAAAA
181 AATATGGCAA AATCTTCTCA TTAAACTTG CTTCTACTAA TGTGGTAGTA GTTCTTTCAG
241 CAAAATTAGC AAAAGAAGTA TTGAAAAAAC AAGATTAAAT ATTTTGTAGT AGACCATCTA
301 TTCTTGGCCA ACAAAAACG TCTTATTATG GTCGTGATAT TGCTTTTGCA CCTTATAATG
361 ATTATTGGAG AGAAATGAGA AAAATTTGTG TTCTTCATCT TTTTAGTTTA AAAAAAGTTC
421 AATTATTAG TCCAATTCGT GAAGATGAAG TTTTAGAAT GATTAAGAAA ATATCAAAAC
481 AAGCTTCTAC TTCACAAATT ATTAATTTGA GTAATTTAAT GATTTCATTA ACAAGTACAA
541 TTATTTGTAG AGTTGCTTTT GGTGTTAGGT TTGAAGAAGA AGCACATGCA AGGAAGAGAT
601 TTGATTTTCT TTTGGCCGAG GCACAAGAAA TGATGGCTAG TTTCTTTGTA TCTGATTTT
661 TTCCCTTTT AAGTTGGATT GATAAATTA GTGGATTGAC ATATAGACTT GAGAGGAATT
721 TCAAGGATTT GGATAATTT TATGAAGAAC TCATTGAGCA ACATCAAAAT CCTAATAAGC
781 CAAATATAT GGAAGGAGAT ATTGTTGATC TTTTGCTACA ATTGAAGAAA GAGAAATTAA
841 CACCATTGA TCTCACTATG GAAGATATAA AAGGAATTCT CATGAATGTG TTAGTTGCAG
901 GATCAGACAC TAGTCAGCT GCTACTGTTT GGGCAATGAC AGCCTTGATA AAGAATCCTA
961 AAGCCATGGA AAAAGTTCAA TTAGAAATCA GAAAATCAGT TGGGAAGAAA GGCATTGTAA
1021 ATGAAGAAGA TGTCCAAAAC ATCCCTTATT TTAAGCAGT GATAAAGGAA ATATTTAGAT
1081 TGTATCCACC AGCTCCACTT TTAGTTCCAA GAGAATCAAT GGAATAAACC ATATTAGAAG
1141 GTTATGAAAT TCGGCCAAGA ACCATAGTTC ATGTTAACGC TTGGGCTATA GCAAGGGATC
1201 CTGAATATG GGAATATCCA GATGAATTTA TACCTGAGAG ATTTTGAAT AGCAGTATCG
1261 ATTACAAGGG TCAAGATTTT GAGTTACTTC CATTGTTGTC AGGCAGAAGA GGTGCCCAG
1321 GTATTGCACT TGGGGTTGCA TCCATGGAAC TTGCTTTGTC AAATCTTCTT TATGCATTTG
1381 ATTGGGAGTT GCCTTATGGA GTGAAAAAAG AAGACATCGA CACAAACGTT AGGCCTGGAA
1441 TTGCCATGCA CAAGAAAAAC GAACTTTGCC TTGTCCCAA AAATTATTTA TAAATTATAT
1501 TGGGACGTGG ATCTCATGCT AGTTCTGTGC GGTGAGCTAA GCTTATTATT TTTGGCTCAA
1561 ATTATGTATA CATAATTAGT ACATGTTTAA AATGTATAAA TATAGTAGAA CCATTCTCAT
1621 GGT

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SEQ. ID. NO. 244

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1 MLFLLFVALP FILIFLLPKF KNGGNNRLPP GPIGLPFI GN LHQYDSITPH IYFWKLSKKY
61 GKIFSLKLAS TNVVVVSSAK LAKEVLKKQD LIFCSRPSIL GQOKLSYYGR DIAFAPYNDY
121 WREMRKICVL HLFSLKKVQL FSPIREDEVF RMIKKISKQA STSQIINLSN LMISLTSTII
181 CRVAFGVRFEE EEAHARKRFD FLLAEAQEMM ASFFVSDFFP FLSWIDKLSG LTYRLERNFK
241 DLNDFYEELI EQHQNPNPKK YMEGDIVDLL LQLKKEKLTPLDLTMEEDIK ILMNVLVAGS
301 DTSAAATVWA MTALIKNPKA MEKVQLEIRK SVGKKGIVNE EDVQNIPIYFK AVIKEIFRLY
361 PPAPLLVPRE SMEKTILEGY EIRPRTIVHV NAWAIARDE IWENPDEFIP ERFNLSIDY
421 KGQDFELLFP GAGRRGCPGI ALGVASMELA LSNLLYAFDW ELPYGVKKED IDTNVVRPGIA
481 MHKKNELCLV PKNYL

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FIG. 123

NAME D235-AB1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 245

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1 AAAATTCATA ATGGTTTTTC CCATAGAAGC CTTTGTAGGA CTAGTAACCT TCACATTCTCT
61 CTTATACTTC CTATGGACAA AAAAATCTCA AAAACTTCCA AAACCCTTAC TACCGAAAAAT
121 CCCCAGGAGGA TGGCCGGTAA TCGGCCATCT TTTTCACTTC AATAACGACG GCGACGACCG
181 TCCATTAGCT CGAAAACCTCG GAGACTTAGC TGATAAATAC GGGCCCGTTT TCAGTTTTTCG
241 GCTAGGTCTT CCCCTTGTGC TAGTTGTAAG CAGTTACGAA GCTATAAAAG ATTGCTTCTC
301 TACAAATGAC GCCATTTTCT CCAATCGTCC AGCTTTTCTT TACGGCGAAT ACCTTGGCTA
361 CAATAATACA ATGCTTTTTT TAGCAAATTA CGGACCTTAC TGGCGAAAAA ATCGTAAATT
421 AGTCATTGAG GAAGTTCTCT CTGCTAGTCG TCTCGAAAAA TTCAAACAAG TGAGATTAC
481 CAGAATTCAA ACGAGCATT AAGAATTTATA CACTCGAATT AATGGAATT CGAGTACGAT
541 AAATCTAAT GATTGGTTAG AAGAATTGGA TTTTGGTCTG ATCGTAAAA TGATCGCTGG
601 GAAAAATTAT GAATCCGGTA AAGGAGATGA ACAAGTGGAA AGATTTAAGA ATGCGTTTAA
661 GGATTTTATG GTTTTATCAA TGGAAATTTGT ATTATGGGAT GCATTTCCAA TTCATTATT
721 TAAATGGGTG GATTTTCAAG GTCATATTAA GGCAATGAAA AGGACATTTA AGGATATAGA
781 TTCTGTTTTT CAGAACTGGT TAGAGGAACA TATTAATAAA AGAGAAAAAA TGGAGGTGG
841 TGCAGAAGGG AATGAACAAG ATTTTCATTGA TGTGGTGCTT TCAAAAATGA GTAAAGAATA
901 TCTTGATGAA GGTACTCTC GTGATACTGT CATTAAAGCA ACAGTTTTTA GTTTGGTCTT
961 GGATGCAGCA GACACAGTTG CTCTTCACAT AAATTGGGGA ATGACATTAT TGATAAACAA
1021 TCAAAATGCC TTGATGAAAG CACAAGAAGA GATAGACACA AAAATTGGTA AGTATAGATG
1081 GGTAGAAGAG AGTGATATTA AGGATTTAGT ATACCTCCAA GCTATTGTTA AAAAGGTGTT
1141 ACGATTATAT CCACCAGGAC CTTTGTAGT ACCACATGAA TATGTAAAGG ATTGTGTTGT
1201 TAGTGGATAT CACATTCCTA AAGGGACTAG ATTATTCGCA AACGTCATGA AACTGCAGCG
1261 CGATCCTAAA CTCTTGTCAA ATCCTGATAA GTTCGATCCA GAGAGATTCA TCGCTGGTGA
1321 TATCGACTTC CGTGGTCACC ACTATGAGTT TATCCCATT TTTCTGGAA GACGATCTTG
1381 TCCGGGGATG ACTTATGCA TGAAGTGA ACACCTAACA ATGGCACATT TAATCCAGGG
1441 TTTCAATTAC AAAACTCCAA ATGACGAGGC CTTGGATATG AAGGAAGGTG CAGGCATAAC
1501 AATACGTAAG GTAAATCCGG TGAATTGAT AATAACGCCT CGCTTGGCAC CTGAGCTTTA
1561 CTAACCTA AGATCTTTCA TCTTGGTTGA TCATTGTTTA ATACTCCTAG ATAGATGGGT
1621 ATTCATC

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SEQ. ID. NO. 246

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1 MVFPPIEAFVG LVTFTEFLLYF LWTKKSQKLP KPLLPKIPGG WPVIGHLFHE NNDGDDRPLA
61 RKLGLDADKY GPVFTFRLGL PLVLVVSSYE AIKDCFSTND AIFSNRPAPL YGEYLYGNNT
121 MLFLANYGPY WRKNRKLVIQ EVLSASRLEK FKQVRFTRI QTSIKNLYTRI NGNSSTINLT
181 DWLEELDFFGL IVKMIAGKNY ESGKGDEQVE RFKNAFKDEM VLSMEFVLWD AFFIPLFKWV
241 DFQGHKAMK RTFKDIDSVF QNWLEEHLINK REKMEVGAEG NEQDFIDVVL SKLSKEYLDE
301 GYSRDTVIAK TVFSLVLDA DVALHINWG MTLINNNQNA LMQAEEIDT KVGKYRWVEE
361 SDIKDLVYLQ AIVKKVLRLY PPGPLLPHE YVKDCVVS GY HIPKGRFLFA NVMKLQRDPK
421 LLSNPKFDP ERFIAGDIDF RGHYEFIPF GSGRRSCPGM TYALQVEHLT MAHLIQGFNY
481 KTPNDEALDM KEGAGITIRK VNPVELIITP RLAPELY

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FIG. 124

NAME D243-AA2
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 247

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1 CAAAAAATCA TTTCTCTCGT CTA AAATGGA TCTTCTCTTA CTAGAGAAGA CCTTAATTGG
61 TCTTTTCTTT GCCATTTTAA TCGCTTTAAT TGTCTCTAAA CTTCGTTCAA AGCGTTTTTAA
121 GCTTCCTCCA GGACCAATTC CAGTACCAGT TTTTGTTAAT TGGCTTCAAG TTGGTGATGA
181 TTTAAACCAC AGAAATCTTA CTGATTATGC CAAAAAATTT GCGGATCTTT TCTTGTAAAG
241 AATGGGTCAA CGTAACTTAG TTGTTGTGTC ATCTCCTGAA TTAGCTAAAG AAGTTTTACA
301 CACACAAGGT GTTGAATTG GTTCAAGAAC AAGAAATGTT GTGTTTGATA TTTTACTGG
361 AAAAGGTCAA GATATGGTTT TACTGTATA TGGTGAACAT TGGAGAAAAA TGAGGAGAAT
421 TATGACTGTA CCATTTTTTA CTAATAAAGT TGTGCAACAG TATAGAGGGG GGTGGGAGTT
481 TGAGGTGGCA AGTGAATTG AGGATGTGAA AAAAAATCCT GAATCTGCTA CTAATGGGAT
541 CGTATTAAGG AGGAGATTAC AATTAATGAT GTATAATAAT ATGTTTAGGA TTATGTTTGA
601 TAGGAGATTT GAGAGTGAAG ATGATCCTTT GTTGTAAAG CTTAAGGCTT TGAATGGTGA
661 AAGGAGTAGA TTGGCTCAAA GTTTTGAGTA TAATTATGGT GATTTTATTC CAATTTTGAG
721 GCCTCTTTTG AGAGGTTATT TGAAGATCTG TAAAGAAAGT AAGGAGAAGA GGCTGCAGCT
781 TTTCAAAGAT TACTTTGTTG ATGAAAGAAA GAAGCTTTCA AATACCAAGA GCTCGGACAG
841 CAATGCCCTA AAATGTGCCA TTGATCACAT TCTTGAGGCT CAACAGAAGG GAGAGATCAA
901 TGAGGACAAC GTTCTTTACA TTGTTGAAAA CATCAATGTT GCTGCAATTG AAACAACATT
961 ATGGTCAATT GAGTGGGGTA TCGCCGAGCT AGTCAACCAC CCTCACATCC AAAAGAAACT
1021 GCGCGACGAG ATTGACACAG TTCTTGGACC AGGAGTGCAA GTGACTGAAC CAGACACCCA
1081 CAAGCTTCCA TACCTTCAGG CTGTGATCAA GGAGGCACCT CGTCTCCGTA TGGCAATTCC
1141 TCTATTAGTC CCACACATGA ACCTTCACGA CGCAAAGCTT GCGCGGCTTG ATATTCCAGC
1201 AGAGAGCAAA ATCTTGGTTA ACGCTTGGTG GTTAGCTAAC AACCGGCTC ATTGGAAGAA
1261 ACCCGAAGAG TTCAGACCCG AGAGGTTCTT TGAAGAGGAG AAGCATGTTG AGGCCAATGG
1321 CAATGACTTC AGATATCTTC CGTTTGGCGT TGGTAGGAGG AGCTGCCCTG GAATTATACT
1381 TGCAATTGCCA ATTCTTGGCA TCACTTTGGG ACGTTTGGTT CAGAACCTTG AGCTGTTGCC
1441 TCCTCCAGGC CAGTCGAAGC TCGACACCAC AGAGAAAGGT GGACAGTTCA GTCTCCACAT
1501 TTTGAAGCAT TCCACCATTG TGTGAAACC AAGGTCTTTC TGAACCTTGT GATCTTATTA
1561 ATTAAGGGGT TCTGAAGAAA TTTGATAGTG TTGG

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SEQ. ID. NO. 248

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1 MDLLLLLEKTL IGLFFAILIA LIVSKLRSKR FKLPPGPPIV PVFGNWLQVG DDLNHRNLTD
61 YAKKFGDLFL LRMGQRNLVV VSSPELAKEV LHTQGVFEFS RTRNVVFDIF TGKGQDMVFT
121 VYGEHWRKMR RIMTVPFFTN KVVQQYRGGW EFEVASVIED VKKNPESATN GIVLRRRLQL
181 MMYNNMFRIM FDRRFESEDD PLFVKLKALN GERSRLAQSF EYNYGDFIPI LRPLLGRYLK
241 ICEVKEKRL QLFKDYFVDE RKKLSNTKSS DSNALKCAID HILEAQQKGE INEDNVLYIV
301 ENINVAIET TLWSIEWGIA ELVNHPIQK KLRDEIDTVL GPGVQVTEPD THKLPYLQAV
361 IKEALRLRMA IPLLVPMMNL HDAKLGGLDI PAESKILVNA WWLANNPAHW KPPEEFRPER
421 FFEEEKHVEA NGNDFRYLPF GVGRRSCPGI ILALPILGIT LGLRLVQNFEI LPPPGQSKLD
481 TTEKGQGFSL HILKHSTIVL KPRSF

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FIG. 125

NAME D244-AD4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 249

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1 AACATTTTGC AATATAGTTT TCCTAGTCAG TTCTAGCCTC CTTTTCCTTA GAAATAATGG
61 ATTATCATAT TTCCTTCCAT TTTCAGGCTC TTTTAGGGCT TTTAGCCTTT GTGTTCTTGT
121 CTATTATCTT ATGGAGAAGA ACACCTCACTT CAAGAAAATT AGCCCTGAA ATCCAGGGG
181 CATGGCCTAT TATAGCCCAT CTTTCGTGAG TGAGTGGTAC TGATAAGAAT ATCCCATTTT
241 CCCGAATATT GGGCGCTTTG GCAGATAAAT ATGGACCTGT CTTACACTG AGAATAGGGA
301 TGTACCCCTA TTTGATTGTC AACAAATGGG AAGCAGCTAA GGATTGCTC ACAACGCATG
361 ATAAGGACTT CGCTGCCCGA CCAACTTCTA TGGCTGGTGA AAGCATCGGG TACAAGTATG
421 CGAGGTTTAC TTATGCTAAT TTTGGTCCTT ATTATAACCA AGTGCGCCAA CTAGCCCTAC
481 AACATGTACC CTCGAGTACT AAACCTCGAGA AAATGAAACA CATACGTGTT TCTGAATTGG
541 AAACCTAGCAT CAAAGAATTA TATTCTTTGA CGCTGGGCAA AAACAACATG CAAAAGTGA
601 ATATAAGTAA ATGGTTTGAA CAATTGACTT TAAACATAAT CGTGAAGACA ATTTGTGGCA
661 AGAGATATAG CAACATAGAG GAGGATGAAG AGGCACAACG TTTGAGAAAG GCATTAAAGG
721 GCATCATGTT TGTGTGAGGG CAAATTTGTT TATATGACGC AATTCCATTC CCATTGTTCA
781 AATACTTTGA TTTCCAAGGT CATATACAAT TGATGAACAA AATTATATAA GACTTAGATT
841 CTATTCTTCA AGGATGGTTG GATGATCATA TGATGAACAA GGATGTAAC AATAAGGATC
901 AAGATGCCAT AGATGCCATG CTTAAGGTAA CACAACCTAA TGAATTCAAA GCCTATGGT
961 TTTCTCAGGC CACTGTGATC AAGTCGACAG TCTTGAGTTT GATCTTAGAT GGAAATGACA
1021 CAACCGCTGT TCATTGATA TGGGTAATGT CCTTATTACT GAACAATCCA CATGTTATGA
1081 AACAGGCCA AGAAGAGATA GACATGAAAG TGGGTAAAGA GAGGTGGATT GAAGATACTG
1141 ACATAAAAAA TTTAGTGTAC CTTCAGGCTA TCGTTAAAGA GACATTGCGC TTGTATCCAC
1201 CTGTTCCCTT TCTTTTACCA CACGAAGCAG TGCAAGATTG TAAAGTGACT GGTACCACA
1261 TTCCTAAAGG TACTCGTCTA TATATCAATG CGTGGAAAGT ACATCGCGAT CCTGAAATTT
1321 GGTGAGAGCC CGAAAAGTTT ATGCCCAATA GATTCCTGAC TAGCAAAGCA AATATAGATG
1381 CTCGCGGTCA AAATTTTGAA TTTATACCGT TTGGTTCTGG GAGACGGTCA TGTCCAGGGA
1441 TAGGTTTTGC GACTTTAGTG ACACATCTGA CTTTGTGTCG CTTGCTTCAA GGTTTTGATT
1501 TTAGTAAGCC ATCAAACAG CCAATTGACA TGACAGAAGG CGTAGGCGTT ACTTTGCCTA
1561 AGGTAAATCA AGTTGAAGTT CTAATTACCC CTCGTTTACC TTCTAAGCTT TATTTATTTT
1621 GAAAGTGCAA ATCATCAATC ATGGCTTGAG TAATTAGTTA TACTTTAATA TGTTTCTC

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SEQ. ID. NO. 250

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1 MDYHISFHQ ALLGLLAFVF LSIILWRRTL TSRKLAPEIP GAWPIIGHLR QLSGTDKNIP
61 FPRILGALAD KYGPVETLRI GMYPYLIVNN WEAARDCLTT HDKDFARPT SMAGESIGYK
121 YARFTYANFG PYYNQVRKLA LQHVPSSTKL EKMKHIVSE LETSIKELYS LTLGKNMQK
181 VNISKWFQEL TLNIIKVTIC GKRYSNIEED EEAQRFRKAF KGIMFVVGQI VLYDAIPFPL
241 FKYFDFQGHI QLMNKIYKDL DSILQGWLDD HMMNKDVNNK DQDAIDAMLK VTQLNEFKAY
301 GFSQATVIKS TVLSLILDGN DTTAVHLIIV MSLLNNPHV MKQGQEEIDM KVGKERWIED
361 TDIKNLVLYQ AIVKETLRLY PPVPFLLPHE AVQDCKVTGY HIPKGTRLYI NAWKVHRDPE
421 IWSEPEKFMP NRFLTSKANI DARGQNEFI PFGSGRRSCP GIGFATLVTH LTFGRLLQGF
481 DFSKPSNTPI DMTEGVGVTL PKVNQVEVLI TPRLP SKLYL F

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FIG. 126

NAME D247-AH1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 251

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1  TGATAATGCT CTTTCTACTC TTTGTAGCCC TTCCTTTCAT TCTTATTTTT CTTCTTCCTA
61 AATTCAAAAA TGGTGGAAT AACAGATTGC CACCAGGTCC TATAGGTTTA CCATTCAATTG
121 GAAATTGCA TCAATATGAT AGTATAACTC CTCATATCTA TTTTGGGAAA CTTTCCAAAA
181 AATATGGCAA AATCTTCTCA TTAAAACTTG CTTCTACTAA TGTGGTAGTA GTTCTTCAG
241 CAAAATTAGC AAAAGAAGTA TTGAAAAAAC AAGATTTAAT ATTTTGTAGT AGACCATCTA
301 TTCTTGGCCA ACAAAAACGT TCTTATTATG GTCGTGATAT TGCTTTTGCA CCTTATAATG
361 ATTATTGGAG AGAAATGAGA AAAATTTGTG TTCTTCATCT TTTTAGTTTA AAAAAAGTTC
421 AATTATTAG TCCAATTCGT GAAGATGAAG TTTTGAAT GATTAAGAAA ATATCAAAAC
481 AAGCTTCTAC TTCACAAATT ATTAATTTGA GTAATTAAT GATTTCATTA ACAAGTACAA
541 TTATTTGTAG AGTTGCTTTT GGTGTTAGGT TTGAAGAAGA AGCACATGCA AGGAAGAGAT
601 TTGATTTTCT TTTGGCCGAG GCACAAGAAA TGATGGCTAG TTTCTTTGTA TCTGATTTTT
661 TTCCTTTTCT AAGTTGGATT GATAAATTAA GTGGATTGAC ATATAGACTT GAGAGGAATT
721 TCAAGGATTT GGATAATTTT TATGAAGAAC TCATTGAGCA ACATCAAAAT CCTAATAAGC
781 CAAAATATAT GGAAGGAGAT ATTGTTGATC TTTTGCTACA ATTTGAAGAAA GAGAAATTAA
841 CACCATTGA TCTCACTATG GAAGATATAA AAGGAATTCT CATGAATGTG TTAGTTGCAG
901 GATCAGACAC TAGTGCAGCT GCTACTGTTT GGGCAATGAC AGCCTTGATA AAGAATCCTA
961 AAGCCATGGA AAAAGTTCAA TTAGAAATCA GAAAATCAGT TGGGAAGAAA GGCATTGTAA
1021 ATGAAGAAGA TGTCCAAAAC ATCCCTTATT TTAAGCAGT GATAAAGGAA ATATTAGAT
1081 TGTATCCACC AGCTCCACTT TTAGTTCCAA GAGAATCAAT GGAAAAACC ATATTAGAAG
1141 GTTATGAAAT TCGGCCAAGA ACCATAGTTC ATGTTAACGC TTGGGCTATA GCAAGGGATC
1201 CTGAAATATG GGAATATCCA GATGAATTTA TACCTGAGAG ATTTTGAAT AGCAGTACCG
1261 ATTACAAGGG TCAAGATTTT GAGTTACTTC CATTGGTGC AGGCAGAAGA GGTGCCCAG
1321 GTATTGCACT TGGGGTTGCA TCCATGGAAC TTGCTTTGTC AAATCTTCTT TATGCATTTG
1381 ATTTGGGAGT GCCTTATGGA GTGAAAAAAG AAGACATCGA CACAACGTT AGGCCTGGAA
1441 TTGCCATGCA CAAGAAAAAC GAACTTTGCC TTGTCCCAA AAATTATTTA TAAATTATAT
1501 TGGGACGTGG ATCTCAATTT AGTCTGTGA GGTGAGC

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SEQ. ID. NO. 252

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1  MLFLLFVALP FILIFLLPKF KNGGNNRLPP GPIGLPFFIGN LHQYDSITPH IYFWKLSKKY
61 GKIFSLKLAS TNVVVVSSAK LAKEVLKKQD LIFCSRPSIL GQQKLSYYGR DIAFAPYNDY
121 WREMRKICVL HLFSLKKVQL FSPIREDEVF RMIKKISKQA STSQIINLSN LMISLTSTII
181 CRVAFGVRFE EEAHARKRFD FLLAEAQEMM ASFFVSDFFP FLSWIDKLSG LTYRLERNFK
241 DLDNFYEELI EQHQNPKNPK YMEGDIVDLL LQLKKEKLT LTLTMDIKG ILMNVLVAGS
301 DTSAAATVWA MTALIKNPKA MEKVQLEIRK SVGKKGIVNE EDVQNIYPYK AVIKEIFRLY
361 PPAPLLVPRE SMEKTILEGY EIRPERTIVHV NAWAIARDPE IWENPDEFIP ERFLNSSTDY
421 KGQDFELLFP GAGRRGCPGI ALGVASMELA LSNLLYAFDW ELPYGVKKED IDTNVRPGIA
481 MHKKNELCLV PKNYL

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FIG. 127

NAME D248-AA6
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 253

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1 CCAAAATCAT GGCCTATCT TTCATATTCA TATCCATAAC CCTAATTTTT CTAGTTCATA
61 AACTCTACCA CCGTCTTAGA TTCAAACTAC CACCGAGTCC GCGGCCGTTA CCGGTGGTCG
121 GAAACCTCTA CGACATAAAA CCGGTGAGAT TCCGGTGCTT TGCCGATTGG GCCAAAACCT
181 ACGGTCCGAT TTTCTCAGTA TACTTTGGGT CACAGTTAAA TGTGTGGTA ACAACAGCTG
241 AATTAGCTAA AGAAGTATTG AAAGAAAATG ACCAGAATTT AGCAGATAGA TTTAGGACTA
301 GACCTGCAAA TAATTTGAGC AGAAATGGGA TGGATTGAT TTGGGCTGAT TATGGGCCCTC
361 ATTATGTGAA AGTAAGGAAG CTCTGTAATC TTGAGCTTTT TACTCCTAAA AGACTTGAAG
421 CTCTTAGACC TATTAGAGAA GATGAAGTTA CTGCTATGGT TGAAACATT TTCAAGGATT
481 GTACTAAGCC TGATAACACA GGTAAAAGCT TGTGATAAG AGAGTACTTA GGATCAGTAG
541 CATCTAACAA CATTACAAGG TTAACATTTG GGAAAAGGTT CATGAACCTCA AAAGGTGAGA
601 TTGATGAGCA AGGTCAAGAA TTCAAGGGTA TTGTCTCTAA TGGCATCAAA ATTGGCGGAA
661 AACTTCCCTT GGCAGAGTAT GTTCCATGGC TCCGTTGGTT TTTCACAATG GAAAACGAGG
721 CACTCGTGAA GCACTCTGCA CGTAGAGACC GGTAAACAAG AATGATCATG GATGAACACA
781 CACTGGCTCG CAAGAAAACCT GGTGATACTA AGCAGCATTT TGTCGATGCA TTGCTTACTC
841 TTCAGAAGCA GTATGATCTT AGTGATGACA CTGTTATTGG CCTCCTCTGG GATATGATTA
901 CAGCAGGAAT GGACACAACA ACCATAACAG TGGAAATGGGC AATGGCAGAA CTAGTTAAGA
961 ACCCAAGAGT GCAACTAAAA GCTCAAGAGG AGCTTGACAG GGTAATCGGA ACGGATCGAA
1021 TCATGTCAGA AACCGATTTC TCTAAACTTC CTTACCTACA ATGTGTAGCC AAAGAGGCTC
1081 TAAGGTTGCA CCCTCCAACCT CCTCTAATGC TTCCTCATAA GGCCAGTGCC AGTGTCAAAA
1141 TTGGTGGTTA TGACATTCTT AAGGGGTCCA TCGTGACAGT GAACGTTTGG GCTGTCGCTC
1201 GTGACCCAGC CGTGTGGAAG AACCCGTTGG AGTTCAGACC AGAGCGCTTC CTTGAGGAAG
1261 ACGTTGACAT GAAGGGTCAC GACTATCGGT TATTGCCCTT TGGTGCAGGA AGGCGTGTTC
1321 GCCCCGGTGC ACAACTTGCT ATCAACTTGG TCACATCTAT GTTGGGTCAT TTGTTGCATC
1381 ATTTTACATG GGCTCCGGCC CCGGGGGTTA ACCCGGAGGA TATTGACTTG GAGGAGAGCC
1441 CTGGAACAGT AACTTACATG AAAAATCCAA TACAAGCTAT TCCAACCTCA AGATTGCCTG
1501 CACACTTGTA TGGACGTGTG CCAGTGGATA TGTAACATAT TTTGTCTTTT CCCTTTTGG
1561 TTATATGATG AG

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SEQ. ID. NO. 254

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1 MALSFIISI TLIFLVHKL HRLRFKLPPG PRPLPVVGNL YDIKPVFRFC FADWAKTYGP
61 IFSVYFGSQL NVVVTAEAL KEVLKENDQN LADRFRTTPA NNLSRNGMDL IWADYGPYHV
121 KVRKLCNLEL FTPKRLEALR PIREDEVTAM VENIFKDCTK PDNTGKSLLI REYLGSAFVN
181 NITRLTFGKR FMNSKGEIDE QGQEFKGIVS NGIKIGGKLP LAEYVPWLRW FFTMENEALV
241 KHSARRDRLT RMIMDEHTLA RKKTGDTKQH FVDALLTLQK QYDLSDBTVI GLLWDMITAG
301 MDTTITITVEV AMAELVKNPR VQLKAQEELD RVIGTDRIIMS ETDFSKLPYL QCVAKEALRL
361 HPPTPLMLPH KASASVKIGG YDIPKGSIVH VNVWAVARDE AVWKNPLEFR PERFLEEDVD
421 MKGHYRLLP FGAGRRVCPG AQLAINLVTS MLGHLHHFT WAPAPGVNPE DIDLEESPGT
481 VTYMKNPIQA IPTPRLPAHL YGRVPEVDM

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FIG. 128

NAME D249-AE8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 255

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1 AATCACTAAT TTTTCATGTAC TCTCATAGGT CAAAAGTTTC AACCAAAATC ATGGCTCTAT
61 CCTTCATATT CATATCCATA ACCCTAATTT TTCTAGTTCA TAAACTCTAC CACCGTCTTA
121 GATTCAAACCT ACCACCAAGT CCGCGGCCGT TACCGGTGGT CGGAAACCTC TACGACATAG
181 AACCGGTGAG ATTCCGGTGC TTGCGCGATT GGGCCAAAAC TTACGGTCCG ATTTTCTCAG
241 TATACTTTGG GTCACAGTTA AATGTTGTGG TAACAACAGC TGAATTAGCT AAAGAAGTAT
301 TGAAAGAAAA TGACCAGAAT TTAGCAGATA GATTTAGGAC TAGACCTGCA AATAATTTGA
361 GCAGAAATGG GATGGATTGG ATTTGGGCTG ATTATGGGCC TCATTATGTG AAAGTAAGGA
421 AGCTCTGTAA TCTTGAGCTT TTTACTCCTA AAAGACTTGA AGCTCTTGA CCTATTAGAG
481 AAGATGAAGT TACTGCTATG GTTGAAAACA TTTTCAAGGA TTGTACTAAG CCTGATAACA
541 CAGGTAAAAG CTTGTTGATA AGAGAGTACT TAGGATCAGT AGCATTCAAC AACATTACAA
601 GGTAAACATT TGGGAAAAGG TTCATGAACCT CAAAAGGTGA GATTGATGAG CAAGGTCAAG
661 AATTCAAGGG TATTGCTCTT AATGGCATCA AAATTGGCGG AAAACTTCCC TTGGCAGAGT
721 ATGTTCCATG GCTCCGTTGG TTTTTCACAA TGGAAAACGA GGCACCTCGT AAGCACTCTG
781 CACGTAGAGA CCGGTAAACA AGAATGATCA TGGATGAACA CACACTGGCT CGCAAGAAAA
841 CTGGTGATAC TAAGCAGCAT TTTGTCGATG CATTGCTTAC TCTTCAGAAG CAGTATGATC
901 TTAGTGATGA CACTGTTATT GGCCTCCTCT GGGATATGAT TACAGCAGGA ATGGACACAA
961 CAACCATAAC AGTGAATGG GCAATGGCAG AACTAGTTAA GAACCAAGA GTGCAACTAA
1021 AAGCTCAAGA GGAGCTTGAC AGGGTAATCG GAACGGATCG AATCATGTCA GAAACCGATT
1081 TCTCTAAACT TCCTTACCTA CAATGTGTAG CCAAAGAGGC TCTAAGGTTG CACCCTCCAA
1141 CTCCTCTAAT GCTTCCTCAT AGGGCCAGTG CCAGTGTCAA AATTGGTGGT TATGACATTC
1201 CTAAGGGGTC CATCGTGCAC GTGAACGTTT GGGCTGTGCG TCGTGACCCA GCCGTGTGGA
1261 AGAACCCGTT GGAGTTTACA CCAGAGCGCT TCCTTGAGGA AGACGTTGAC ATGAAGGGGT
1321 ACGACTATCG GTTATTGCCC TTTGGTGCAG GAAGGCGTGT TTGCCCCGTT GCACAACTTG
1381 CTATCAACTT GGTACACATC ATGTTGGGTC ATTTGTTGCA TCATTTTACA TGGGCTCCGG
1441 CCCCGGGGGT TAACCCGGAG GATATTGACT TGGAGGAGAG CCCTGGAACA GTAACCTTACA
1501 TGAAAAATCC AATACAAGCT ATTCCAACCT CAAGATTGCC TGCACACTTG TATGGACGTG
1561 TGCCAGTGGG TATGTAAAC

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SEQ. ID. NO. 256

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1 MYSHRSKVST KIMALSFIFI SITLIFLVHK LYHRLRFKLP PGPRPLPVVG NLYDIEPVRF
61 RCFADWAKTY GPIFSVYFGS QLNVVVTAE LAKEVLKEND QNLADRFRTR PANNLSRNGM
121 DLIWADYGPY YVKVRKLCNL ELFTPKRLEA LRPIREDEVT AMVENIFKDC TKPDNTGKSL
181 LIREYLGSA FNNITRLTFG KRFMNSKGEI DEQQQEFKGI VSNGIKIGGK LPLAEYVPWL
241 RWFFTMENEA LVKHSARRDR LTRMIMDEHT LARKKTGDTK QHFVDALLTL QKQYDLSDDT
301 VIGLLWDMIT AGMDTTTTIT EWAMAELVKN PRVQLKAQEE LDRVIGTDRI MSETDFSCLP
361 YLQCVAKEAL RLHPPTPLML PHRASASVKI GGYDIPKGI VHVNVWAVAR DPAVWNKPLE
421 FRPERFLEED VDMKGDYRL LPFGAGRRVC PGAQLAINLV TSMGLHLLHH FTWAPAPGVN
481 PEDIDLEESP GTVTYMKNPFI QAIPTRPLPA HLYGRVPVDM

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FIG. 129

NAME D250-AC11
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 257

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1 ATAATGCTCT TTCTACTCTT TGTAGCCCTT CCTTTCATTC TTATTTTCT TCTTCCTAAA
61 TTCAAAAATG GTGGAAATAA CAGATTGCCA CCAGGTCCTA TAGGTTTACC ATTCATTGGA
121 AATTTGCATC AATATGATAG TATAACTCCT CATATCTATT TTTGGAAACT TTCCAAAAAA
181 TATGGCAAAA TCTTCTCATT AAAACTTGCT TCTACTAATG TGGTAGTAGT TTCTTCAGCA
241 AAATTAGCAA AAGAAGTATT GAAAAACAA GATTTAATAT TTTGTAGTAG ACCATCTATT
301 CTTGGCCAAC AAAAAGTCTC TTATTATGGT CGTGATATTG CTTTTCACCC TTATAATGAT
361 TATTGGAGAG AAATGAGAAA AATTTGTGTT CTTTCATCTT TTAGTTTAAA AAAAGTTCAA
421 TTATTTAGTC CAATTCGTGA AGATGAAGTT TTTAGAATGA TTAAGAAAAT ATCAAAACAA
481 GCTTCTACTT CACAAATTAT TAATTTGAGT AATTTAATGA TTTTATTAC AAGTACAATT
541 ATTTGTAGAG TTGCTTTTGG TGTTAGGTTT GAAGAAGAAG CACATGCAAG GAAGAGATTT
601 GATTTTCTTT TGGCCGAGGC ACAAGAAATG ATGGCTAGTT TCTTTGTATC TGATTTTTTTT
661 CCCTTTTAA GTTAGATTGA CAAATTAAGT GGATTGACAT ATAGACTTGA GAGGAATTTT
721 AAGGATTGG ATAATTTTGA TGAAGAAGTC ATTGAGCAAC ATCAAAATCC TAATAAGCCA
781 AAATATATGG AAGGAGATAT TGTGTATCTT TTGTACAAT TGAAGAAAGA GAAATTAACA
841 CCACCTTGATC TCACATATGA AGATATAAAA GGAATTCCTA TGAATGTGTT AGTTGCAGGA
901 TCAGACACTA GTGCAGCTGC TACTGTTTGG GCAATGACAG CCTTGATAAA GAATCCTAAA
961 GCCATGGAAA AAGTTCAATT AGAAATCAGA AAATCAGTTG GGAAGAAAGG CATTGTAAAT
1021 GAAGAAGATG TCCAAACAT CCCTTATTTT AAAGCAGTGA TAAAGGAAAT ATTTAGATTG
1081 TATCCACCAG CTCCACTTTT AGTTCCAAGA GAATCAATGG AAAAACCAT ATTAGAAGGT
1141 TATGAAATTC GGCCAAGAAC CATAGTTCAT GTTAACGCTT GGGCTATAGC AAGGGATCCT
1201 GAAATATGGG AAAATCCAGA TGAATTTATA CCTGAGAGAT TTTTGAATAG CAGTATCGAT
1261 TACAAGGGTC AAGATTTTGA GTTACTTCCA TTTGGTGCAG GCAGAAGAGG TTGCCAGGT
1321 ATTGCACTTG GGGTTGCATC CATGGAAGTT GCTTTGTCAA ATCTTCTTTA TGCATTGAT
1381 TGGGAGTTGC CTTATGGAGT GAAAAAAGAA GACATCGACA CAAACGTTAG GCCTGGAATT
1441 GCCATGCACA AGAAAAACGA ACTTTGCCTT GTCCCAAAA AATTATTTAT AAATTATATT
1501 GGGACGTGGA TCTCATGCTA GTTCTGTGCG GTCAGCTAAG CTTA

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SEQ. ID. NO. 258

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1 MLFLLFVALP FILIFLLPKF KNGGNNRLPP GPIGLPFIGN LHQYDSITPH IYFWKLSKKY
61 GKIFSLKLAS TNVVVVSSAK LAKEVLKKQD LIFCSRPSIL GQQKLSYYGR DIAFAPYNDY
121 WREMRKICVL HLFSLKKVQL FSPIREDEVF RMIKKISKQA STSQIINLSN LMSISLTSTII
181 CRVAFGVREF EEAHARKRFD FLLAEAQEMM ASFFVSDFFP FLS.IDKLSG LTYRLERNFK
241 DLNFEYELI EQHQNPKNPK YMEGDIVDLL LQLKKEKLT LDLTMEDIKG ILMNVLVAGS
301 DTSAAATVWA MTALIKNPKA MEKVQLEIRK SVGKKGIVNE EDVQNIPIYFK AVIKEIFRLY
361 PPAPLLVPRE SMEKTILEGY EIRPERTIVHV NAWAIARDPE IWENPDEFIP ERFNLSSIDY
421 KGQDFELLFP GAGRRGCPGI ALGVASMELA LSNLLYAFDW ELPYGVKKED IDTNVRPGIA
481 MHKKNELCLV PKKLFINYIG TWISC

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FIG. 130

NAME D259-AB9
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 259

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1 CACATTGAGT CCTCTCCCAA ATCACTGATT CACCACCAAA AGTACCAACA ATTCAATGGA
61 AGGTACAAAC TTGACTACAT ATGCAGCAGT ATTTCTTGAT ACTCTGTTTC TTTTGTTCCT
121 TTCCAAACTT CTTCGCCAGA GGAACCTCAA TTTACCTCCA GGCCCAAAAC CATGGCCGAT
181 CATCGGAAAC TTAACCTTAA TTGGCAATCT TCCTCATCGC TCAATCCACG AACTCTCCCT
241 CAAGTACGGA CCCGTTATGC AACTCCAATT CGGGTCTTTC CCCGTTGTAG TTGGATCCTC
301 CGTCGAAATG GCTAAGATTT TCCTCAAATC CATGGATATT AACTTTGTAG GCAGGCCATA
361 AACGGCTGCC GGAAATACA CAACGTACAA TTATCCCGAT ATTACATGGT CTCCTTACGG
421 ACCATATTGG CGCCAGGCAC GTAGGATGTG CCTAACGGAA TTATTCAGCA CGAAACGCTC
481 CGATTTCATAC GAGTATATT GGGCTGAGGA GTTGCATTCT CTTCTCCATA ATTTGAACAA
541 AATATCAGGG AAACCAATTG TGTGAAAGA TTATTTGACG ACGTTGAGTT TAAATGTTAT
601 TAGCAGGATG GTACTGGGGA AAAGGTATTT GGACGAATCC GAGAAGCTCGT TCGTGAATCC
661 TGAGGAATTT AAGAAGATGT TGGACGAATT GTTTTGTGTA AATGGTGTAC TTAATATTGG
721 AGATTCGAAT CCATGGATTG ATTTTCATGGA TTTGCAAGGT TATGTTAAGA GGATGAAAGT
781 AGTGAGCAAG AAATTCGACA AGTTTTTAGA GCATGTTATT GATGAGCATA ACATTAGGAG
841 AAATGGAGTG GAGAATTATG TTGCTAAGGA TATGGTGGAT GTTTTGTGTC AGCTTGCTGA
901 TGATCCGAAG TTGGAAGTTA AGCTGGAGAG ACATGGAGTC AAAGCATTCA CTCAGGATAT
961 GCTGGCTGGT GGAACCGAGA GTTCAGCAGT GACAGTGGAG TGGGCAATTT CAGAGCTGCT
1021 AAAGAAGCCG GAGATTTTCA AAAAGGCTAC AGAAGAAATG GATCAGATAA TTGGGCAGAA
1081 TAGATGGGTA CAAGAAAAGG ACATTCCAAA TCTTCCTTAC ATAGAGGCAA TAGTCAAAGA
1141 GACTATGCGA CTGCACCCCG TGGCACCAAT GTTGGTGCCA CGTGAGTGTG GAGAAGATAT
1201 TAAGGTAGCA GGCTACGACG TTCAGAAAGG AACTAGGGTT CTCGTGAGTG TATGGACTAT
1261 TGGAAGAGAC CCTACATTGT GGGACGAGCC TGAGGTGTTC AAGCCGGAGA GATTCATGA
1321 AAAGTCCATA GATGTTAAAG GACATGATTA TGAGCTTTTG CCATTTGGAG CGGGGAGAAG
1381 AATGTGCCCG GGTATATAGT TGGGGCTCAA GGTGATTCAA GCTAGCTTAG CTAATCTTCT
1441 ACATGGATTT AACTGGTCAT TGCTGATAA TATGACTCCT GAGGACCTCA ACATGGATGA
1501 GATTTTTGGG CTCTCTACAC CTAAAAAATT TCCACTTGCT ACTGTGATTG AGCCAAGACT
1561 TTCACCAAAA CTTTACTCTG TTTGATTGAG CAGTTCTATG GTTCCGTCAG GATAG

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SEQ. ID. NO. 260

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1 MEGTNLTYYA AVFLDTLFL FLSKLLRQK LNLPPGPKPW PIIGNLNLIG NLPHRSIHEL
61 SLKYGPVQML QFGSFPVVVG SSVEMAKIFL KSMDINFVGR PKTAAGKYTT YNYSIDITWSP
121 YGPYWRQARR MCLTELFSTK RLDSYFYIRA EELHSLHLNL NKISGKPIVL KDYLTTLSLN
181 VISRMVLGKR YLDESENSFV NPPEFFKKMLD ELFLNGVLN IGDSPWIDF MDLQGYVKRM
241 KVVSKKFDKF LEHVIDEHNI RRNGVENYVA KDMVDVLLQL ADDPKLEVKL ERHGVKAFTQ
301 DMLAGGTES AVTVEWAISE LLKKPEIFKK ATEELDRVIG QNRWVQEKDI PNLPIEIV
361 KETMLRHPVA PMLVPRECRE DIKVAGYDVQ KGTRVLVSVW TIGRDP TLWD EPEVFKPERF
421 HEKSIDVKGH DYELLFPFAG RRMCPGYSLG LKVIQASLAN LLHGFNWSLP DNMTPELNLN
481 DEIFGLSTPK KFPLATVIEP RLSPKLYSV

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FIG. 131

NAME D218A-AC2
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 261

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1 CTTCTTCTCTT CCTAATAAAA AATGGAGATT CAGTTTTCTA ACTTAGTTGC ATTCTTGCTC
61 TTTCTCTCCA GCATCTTTCT TGTATTCAAA AAATGGAAAA CCAGAAAACT AAATTTGCCT
121 CCTGGTCCAT GGAAATTACC TTTTATTGGA AGTTTACACC ATTTGGCTGT GGCAGGTCCA
181 CTTCTCACC ATGGCTTAAA AAATTTAGCC AAAGCTATG GTCTCTTAT GCATTTACAA
241 CTTGGACAAA TTCCTACACT CGTCATATCA TCACCTCAA TGGCAAAAAGA AGTACTAAAA
301 ACTCACGACC TCGCTTTTGC CACTAGACCA AAGCTTGTCTG TGGCCGACAT CATTCACTAC
361 GACAGCACGG ACATAGCACT TTCGCCATAC GGTGAATACT GGAGACAAAT TCGTAAATTT
421 TGCATATTGG AACTCTTGAG TGCCAAGATG GTCAAGTTT TTAGCTCGAT TCGCCAAGAT
481 GAGCTCTCGA AGATGGTTTC ATCTATACGA ACGACGCCCA ATCTCCAGT CAATCTTACC
541 GACAAGATTT TTGGTTTAC GAGTTCGGTA ATTTGTAGAT CAGCTTTAGG GAAGATATGT
601 GGTGACCAAG ACAATTTGAT CATTTTTATG AGGGAATAA TATCATTTGGC AGGTGGATTT
661 AGTATTGCTG ATTTTTCCTC TACATGGAAA ATGATTTCATG ATATTGATGG TTCAAAATCT
721 AAAGTGGTGA AGGCACATCG TAAGATTGAT GAAATTTTGG AAAATGTGGT AAATGAGCAC
781 AAACAGAAATC GAGCAGATGG TAAAAAGGGT AATGGTGAAT TTGGTGGAGA AGATCTGATT
841 GATGTTTTGT TAAGAGTTAG AGAAAAGTGA GAAGTTCAA TTCCAATCAC AGATGACAA
901 ATCAAATCAA TATTAATCGA CATGTTCTCT GCCGGATCGG AAACATCATC GACAACTATA
961 ATTTGGGCAT TAGCTGAAAT GATGAAGAAA CCAAGTGTTT TAGCAAAGGC ACAAGCTGAA
1021 GTGAGCCAAAG CTTTGAAGGG GAAGAAAAT AGTTTTCAG AGATTGATAT TGATAAGCTA
1081 AAGTATTTGA AGTTAGTGAT CAAAGAACT TTAAGAAATG ACCCTCCAAT TCCTCTGTTA
1141 GTCCTAGAG AATGTATGGA AGATACAAAG ATTGATGGTT ACAATATACC TTTCAAAACA
1201 AGAGTCATTG TTAATGCATG GGCAATTGGA CGAGATCCTC AAAGTTGGGA TGATCCTGAA
1261 AGCTTTACGC CAGAGAGATT TGAGAATAAT TCTATTGATT TTCTTGAAA TCATCATCAA
1321 TTTATTCCAT TTGGTGCAGG AAGAAGGATT TGTCTGGGAA TGCTATTTGG TTTAGCTAAT
1381 GTTGACCAAC CTTTAGCTCA GTTACTTTAT CACTTCGATT GGAACCTCCC TAATGGACAA
1441 ACTCACCAAA ATTTTCGACAT GACTGAGTCA CCTGGAATTT CTGCTACAAG AAAGGATGAT
1501 CTTATTTTGA TTGCCACTCC TGCTCATTTCT TGATTAAGTA TTGCTGCTTT TCTATTGGAG
1561 AATTTTCAA ATTCTATCC AATATATAGT GTTTGCTAGA GTTGGTTAG

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SEQ. ID. NO. 262

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1 MEIQFSNLVA FLLFLSSIFL VFKKWKTRKL NLPPGPWKLP FIGSLHHLAV AGPLPHHGLK
61 NLAKRYGPLM HLQLGQIPTL VISSPQMAKE VLKTHDLAFA TRPKLVVADI IHYDSTDIAL
121 SPYGEYWRQI RKICILELLS AKMVKFFSSI RQDELSKMVS SIRTTPNLPV NLTDKIFWFT
181 SSVICRSALG KICGDQDKLI IFMREIISLA GGFSIADFFP TWKMIHDIDG SKSKLVKAHR
241 KIDEILENVV NEHKQNRADG KKGNGEFGGE DLIDVLLVRV ESSEVQIPIT DDNIKSILID
301 MFSAGSETSS TTIIWALAEM MKKPSVLAKA QAEVSQALKG KKISFQEIDI DKLYLKLVI
361 KETLRMHPPPI PLLVPRECE DTKIDGYNIP FKTRVIVNAW AIGRDPQSWD DPESFTPERF
421 ENNSIDFLGN HHQFIPFGAG RRICPGMLFG LANVGQPLAQ LLYHFDWKLP NGQTHQNFDM
481 TESPGISATR KDDLILIIATP AHS

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FIG. 132

NAME D210-BD4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 263

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1 CTTTCATCAT ATGGCATGAA ATGGGAAATG CTCACAACAG CAAAATTGCA GCAATCTGTT
61 TGATAATTTT CTTGGTATAT AAAGCATGGG AATTGTTGAA GTGGATATGG ATTAAGCCAA
121 AGAACTGGA GAGTTGCCTC AGAAAACAGG GACTCAAAGG AAATCCTAC GGGCTATTCT
181 ATGGAGATAT GAAAGAATtG TCCAAAAGTC TCAAGGAAAT CAATTCAAAG CCCATCATCA
241 ATCTATCAAA TGAAGTAGCC CCAAGAATCA TTCCTTAtA TCTTGAAATC ATCCAAAAAT
301 ATGGTAAAG ATGTTTTGTT TGGCAAGGAC CAACCCCGC AATATTAATA ACAGAGCCAG
361 AATTAATAAA GGAGATATTT GGTAAGAAGT ATGTTTTTCA GAAGCCTAAT AATCCCAACC
421 CACTGACCAA GTTATTGGCT CGAGGTGTTG TAAGCTACGA GGAAGAAAAA TGGGCAAAAC
481 ACAGAAAGAT CTTAAATCCT GCCTTTCATA TGGAGAAGTT GAAGCATATG CTACCAAGCAT
541 TTTACTTGAG CTGTAGTGAG ATGCTGAACA AATGGGAGGA GATTATCCCA GTAAAAGAAT
601 CAAATGAGTT GGACATTTGG CCTCATCTTC AAAGAATGAC AAGTGATGTG ATTTCTCGTG
661 CTGCCTTTGG TAGTAGCTAC GAAGAAGGAA GAAGAATATT TGAACCTCAA GAAGAACAAG
721 CTAGATATCT AACGAAGACA TTCAATTCAG TTTATATCCC AGGTTCAGA TTTTTTCCCA
781 ATAAAATGAA CAAAAGAATG AAAGAATGTG AAAAGGAAGT ACGAGAAACA ATTACGTGTC
841 TAATTGACAA CAGATTAAAG GCAAAAGAAG AAGGCAATGG CAAGGCCCTC AATGATGACC
901 TATTGGGTAT ATTATTAGAG TCAAAATCTA TAGAAATTGA AGAATATGGT AACAAGAAGT
961 TTGGAATGAG TATACCTGAA GTAATTGAAG AGTGCAAAAT ATTCTATTTT GCTGGCCAAG
1021 AGACTACATC AGTATTGCTT GTGTGGACAC TGATTTTGTT AGGGAGAAAt cCAGAATGGC
1081 AGGAACGTGC TAGAGAGGAA GTTTTTCAG CCTTTGGAAG TGATAAACCA ACTTTTGACG
1141 AATTATATCG CTGAAAATT GTGACGATGA TTTTGACGA GTCTTTAAGG TTATATCCAC
1201 CAATAGCAAC TCGTACTCGA AGGACTAATG AAGAAACAAA ATTAGGGGAA CTAGATTTAC
1261 CAAAGGGTGC ACTGCTCTTT ATACCAACAA TCTTATTACA TCTTGACAGG GAAATTGGGG
1321 GTGAAGATGC AGATGAGTTC AATCCGGAGA GATTTAGCGA AGGGGTGGCA AAGGCAACAA
1381 AGGGGAAAT GACATATTTT CCATTTGGTG CAGGACCGCG AAAATGCATT GGGCAAAACT
1441 TCGCGATTTT GGAAGCAAAA ATGGCTATAG CTATGATTCT ACAACGCTTC TCCTTCGAGC
1501 TCTCTCCATC TTATACACAC TCTCCATACA CTGTGGTCAC TTTGAAACCC AAATATGGTG
1561 CTCCCCTAAT AATGCACAGG CTGTAGTCCT GTGAGAATAT GCTATCCGAG G

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SEQ. ID. NO. 264

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1 MGNHNSKIA AICLIIFLVY KAWELLKWIW IKPKKLESCL RKQGLKGSY GLFYGDMKEL
61 SKSLKEINSK PIINLSNEVA PRIIPYYLEI IQKYGKRCFV WQGPPTAILI TEPELIKEIF
121 GKNYVFQKPN NPNPLTKLLA RGVVSYEEK WAKHRKILNP AFHMEKLKHM LPAFYLSCE
181 MLNKWEEIIP VKESNELDIW PHLQRMSTDV ISRAAFGSSY EEGRRIFELQ EEQAEYLTKT
241 FNSVYIPGSR FFPNKMNMKRM KECEKEVRET ITCLIDNRLK AKEEGNGKAL NDDLGLILLE
301 SNSIEIEEHG NKKFGMSIPE VIEECKLFYF AQOETTSVLL VWTLLILGRN PEWQERAREE
361 VFQAFGSDKP TFDLYRLKI VTMLYSLR LYPPIATRTR RNEETKLGE LDLPKGALLF
421 IPTILLHLDR EIWGEDADEF NPERFSEGVA KATKGKMTYF PFAGAPRKCI GQNFALILEAK
481 MAIAMILQRF SFELSPSYTH SPYTVVTLKP KYGAPLIMHR L

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FIG. 133

NAME D233-AG7
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 265

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1 CTCATTATCC ATCACCTAAA ATGGAGAATT CTTGGGTTTT TCTAGCCTTG GCAGGGCTAT
61 CTGCATTAGC TTTTCTCTGT AAAATAATCA CCTGTCGAAG ACCGGTTAAC CGGAAAATAC
121 CACCAGGTCC AAAACCATGG CCCATCATTG GCAATTTGAA CCTACTTGGT CCTATACCAC
181 ATCAATCTTT TGACTTGTCT TCCAAAAAAT ATGGAGAGTT GATGCTGCTG AAATTTGGCT
241 CCAGGCCAGT TCTTGTGCT TCATCTGCTG AAATGGCAAA ACAGTTTTTA AAAGTACATG
301 ATGCTAATTT CGCCTCCCGT CCTATGCTAG CTGGTGGAAA GTATACAAGC TATAACTATT
361 GTGACATGAC ATGGGCACCC TATGGTCCCT ATTGGCGCCA AGCACGACGA ATTTACCTTA
421 ACCAGATATT TACTCCGAAA AGGCTAGACT CGTTCGAGTA CATTCTGTGT GAAGAAAGGC
481 AGGCCTTGAT TTCCCAGCTG AATTCCTCTG CTGGAAGGCC ATTTTTTCTC AAAGACCATT
541 TGTCGCGATT TAGCCTCTGC AGCATGACAA GGATGGTTTT GAGCAACAAG TATTTTGGTG
601 AATCAACAGT TAGAGTAGAA GATTTGCAGT ACCTGGTAGA TCAATGGTTC TTACTTAATG
661 GTGCTTTCAA CATTGGAGAT TGGATTCCAT GGCTCAGCTT CTTGGACCTA CAAGGCTATG
721 TGAACAACAT GAAGGCTTTG AAAAGAACTT TTGATAAGTT CCACAACATT GTGCTAGATG
781 ATCACAGGGC TAAGAAGAAT GCAGAGAAGA ACTTTGTCCC AAAAGACATG GTTGATGTCT
841 TGTGAAGAT GGTGAAGAT CCTAATCTGG AAGTCAAAC CACTAATGAC TGTGTCAAAG
901 GGTAAATGCA GGATTTACTA ACTGGAGGAA CAGATAGCTT AACAGCAGCA GTGCAATGGG
961 CATTTCAAGA ACTTCTTAGA CAGCCAAGGG TTATTGAGAA GGCAACCGAA GAGCTTGACC
1021 GGATTGTCGG GAAAGAGAGA TGGGTAGAAG AGAAAGATTG CTCGCAGCTA TCTTACGTTG
1081 AAGCAATCCT CAAGGAAACA CTAAGGTTAC ATCCTCTAGG AACTATGCTA GCACCCGATT
1141 GTGCTATAGA AGATTGTAAC GTGGCTGGTT ATGACATACA GAAAGGAACG ACCTTTCTGG
1201 TGAATGTTTG GACCATTGGA AGGGACCCAA AATACTGGGA TAGAGCACAA GAGTTTCTCC
1261 CCGAGAGATT TTTAGAGAAC GACATTGATA TGGACGGACA TAACTTTGCT TTCTTGCCAT
1321 TTGGCTCGGG GCGAAGGAGG TGCCCTGGCT ATAGCCTTGG ACTTAAGGTT ATCCGAGTAA
1381 CATTAGCCAA CATGTTGCAT GGATTCAACT GGAATATTACC TGAAGGTATG AAGCCAGAAG
1441 ATATAAGTGT GGAAGAACAT TATGGGCTCA CTACACATCC TAAGTTTCCT GTTCTGTGA
1501 TCTTGGAATC TAGACTTTCT TCAGATCTCT ATTCCCCCAT CACTTAATCC TAAGTGCTTC
1561 CTATTATAGC

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SEQ. ID. NO. 266

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1 MENSWVFLAL AGLSALAFLC KIITCRRPVN RKIPPGPKPW PIIGNLNLG PIPHQSFDDL
61 SKKYGELMLL KFGSRPVLVA SSAEMAKQFL KVHDANFASR PMLAGGKYTS YNYCDMTWAP
121 YGPYWRQARR IYLNQIFTPK RLDSFEYIRV EERQALISQL NSLAGKPFEL KDHLRSFSLC
181 SMTRMVLSEN YFGESTVRVE DLQYLVQWFF LLNGAFNIGD WIPWLSFLDL QGYVKQMKAL
241 KRFTDKFHNI VLDHRAKKN AEKNFVPKDM VDVLLKMAED PNLEVKLTND CVKGLMQDLL
301 TGGTDSLTAQ VQWAFQELLR QPRVIEKATE ELDRIVGKER WVEEKDCSQL SYVEAILKET
361 LRLHPLGTML APHCAIEDCN VAGYDIQKGT TFLVNVWTIG RDPKYWDRAQ EFLPERFLEN
421 DIDMDGHNFA FLFFGSGRRR CPGYSLGLKV IRVTLANMLH GFNWKLPEGM KPEDISVEEH
481 YGLTHPKFP VPVILESRLS SDLYSPIT

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FIG. 134

NAME D257-AE4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 267

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1 CACATTGAGT CCTCTCCCAA ATCACTGATT CACCACCAAA AGTACCAACA ATTCAATGGA
61 AGGTACAAAC TTGACTACAT ATGCAGCAGT ATTTCTTGAT ACTCTGTTTC TTTTGTTCCT
121 TTCCAAACTT CTTGCGCCAGA GGAAACTCAA TTTACCTCCA GGCCCAAAAC CATGGCCGAT
181 CATCGGAAAC TTAAACCTTA TTGGCAATCT TCCTCATCGC TCAATCCACG AACTCTCCCT
241 CAAGTACGGA CCCGTTATGC AACTCCAATT CGGGTCTTTC CCCGTTGTAG TTGGATCCTC
301 CGTCGAAATG GCTAAGATTT TCCTCAAATC CATGGATATT AACTTTGTAG GCAGGCCATA
361 AACGGCTGCC GGAAATACA CAACGTACAA TTATTCGGAT ATTACATGGT CTCCTTACGG
421 ACCATATTGG CGCCAGGCAC GTAGGATGTG CCTAACGGAA TTATTCAGCA CGAAACGTCT
481 CGATTTCATC GAGTATATTC GGGCTGAGGA GTTGCATTCT CTTCTCCATA ATTTGAACAA
541 AATATCAGGG AAACCAATTG TGTGAAAGA TTATTTGACG ACGTTGAGTT TAAATGTTAT
601 TAGCAGGATG GTACTGGGGA AAAGGTATTT GGACGAATCC GAGAACTCGT TCGTGAATCC
661 TGAGGAATTT AAGAAGATGT TGGACGAATT GTTTTGTCTA AATGGTGTAC TTAATATTGG
721 AGATTCGAAT CCATGGATTG ATTTTCATGA TTTGCAAGGT TATGTTAAGA GGATGAAAGT
781 AGTGAGCAAG AAATTCGACA AGTTTTTAGA GCATGTTATT GATGAGCATA ACATTAGGAG
841 AAATGGAGTG GAGAAATTAT TTGCTAAGGA TATGGTGGAT GTTTTGTGTC AGCTTGCTGA
901 TGATCCGAAG TTGGAAGTTA AGCTGGAGAG ACATGGAGTC AAAGCATTCA CTCAGGATAT
961 GCTGGCTGGT GGAACCGAGA GTTCAGCAGT GACAGTGGAG TGGGCAATTT CAGAGCTGCT
1021 AAAGAAGCCG GAGATTTTCA AAAAGGCTAC AGAAGAATTG GATCAGGTAA TTGGGCAGAA
1081 TAGATGGGTA CAAGAAAAGG ACATTCCAAA TCATCCTTAC ATAGAGGCAA TAGTCAAAGA
1141 GACTATGCGA CTGCACCCCG TGGCACCAAT GTTGGTGCCA CGTGAGTGTC GAGAAGATAT
1201 TAAGGTAGCA GGCTACGACG TTCAGAAAGG AACTAGGGTT CTCGTGAGTG TATGGACTAT
1261 TGGAAGAGAC CCTACATTGT GGGACGAGCC TGAGGTGTTC AAGCCGGAGA GATTCCATGA
1321 AAAGTCCATA GATGTTAAAG GACATGATTA TGAGCTTTTG CCATTTGGAG CGGGGAGAAG
1381 AATGTGCCCG GGTATATAGCT TGGGGCTCAA GGTGATTCAA GCTAGCTTAG CTAATCTTCT
1441 ACATGGATTT AACTGGTCAT TGCCTGATAA TATGACTCCT GAGGACCTCA ACATGGATGA
1501 GATTTTTGGG CTCTCTACAC CTAATAAATT TCCACTTGCT ACTGTGATTG AGCCAAGACT
1561 TTCACCAAAA CTTTACTCTG TTTGATTGAG CAGTCTATAG GATCCGTCAG GATAGAC

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SEQ. ID. NO. 268

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1 MEGTNLTYYA AVFLDTLFLF FLSKLLRQK LNLPPGPKPW PIIGNLNLIG NLPHRSIHEL
61 SLKYGPVMQL QFGSFPVVVG SSVEMAKIFL KSMDINLVGR PKTAAGKYTT YNYSIDITWSP
121 YGPYWRQARR MCLTELFSTK RLDSYEYIRA EELHSLHLNL NKISGKPIVL KDYLTTLSLN
181 VISRMVLGKR YLDESESNFV NPEEFKMLD ELFLNLGVIN IGDSPWIDF MDLQGYVKRM
241 KVVSKFKDFK LEHVIDEHNI RRNGVENYVA KDMVDVLLQL ADDPKLEVKL ERHGVKFTQ
301 DMLAGGTESS AVTVEWAISE LLKKPEIFKK ATEELDRVIG QNRWVQEKDI PNHPYIEAIV
361 KETMRLHPVA PMLVPRECRE DIKVAGYDVQ KGTRVLVSVM TIGRDPPTLWD EPEVFKPERF
421 HEKSIDVKGH DYELLPPFAG RRMCPGYSLG LKVIQASLAN LLHGFNWSLP DNMTPELDNM
481 DEIFGLSTPK KFPLATVIEP RLSFKLYSV

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FIG. 135

NAME D268-AE2
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 269

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1  TGCAATATAG TTTTCCTAGT CAGTTCCTAGC CTCCTTTTCC TTAGAAATAA TGGATTATCA
61 TATTTCTTTC CATTTTCAAG CTCTTTTAGG GCTTTTAGCC TTTGTGTCT TGTCTATTAT
121 CTTATGGAGA AGAACTCTCA CTTCAGAAA ATTAGCCCTT GAAATCCCAG GGGCATGGCC
181 TATTATAGGC CATCTTCGTC AGCTGAGTGG TACTGATAAG AATATCCCAT TTCCCCGAAT
241 ATTGGGCGCT TTGGCAGATA AATATGGACC TGTCTTCACA CTGAGAATAG GGATGTACCC
301 CTATTTGATT GTCAACAATT GGAAGCAGC TAAGGATTGT CTCACAACGC ATGATAAGGA
361 CTTGCTGCC CGACCAACTT CTATGGCTGG TGAAGCATC GGGTACAAGT ATGCGAGGTT
421 TACTTATGCT AATTTTGGTC CTTATTATAA CCAAGTGCGC AAAGTAGCCC TACAACATGT
481 ACTCTCGAGT ACTAACTCG AGAAAATGAA ACACATACGT GTTCTGAAT TGGAACTAG
541 CATCAAGAA TTATATTCTT TGACGCTGGG CAAAACAAC ATGCAAAAAG TGAATATAAG
601 TAAATGGTTT GAACAATTGA CTTTAAACAT AATCGTGAAG ACAATTTGTG GCAAGAGATA
661 TAGCAACATA GAGGAGGATG AAGAGGCACA ACGTTTCAGA AAGGCATTTA AGGGCATCAT
721 GTTTGTTGTA GGGCAAATTG TTTTATATGA CGCAATTCCA TTCCCATTTG TCAAACTACTT
781 TGATTTCCAA GGTCTATATC AATTGATGAA CAAATTTTAT AAAGACTTAG ATTCTATTCT
841 TCAAGGATGG TTGGATGATC ATATGATGAA CAAGGATGTA AACAATAAGG ATCAAGATGC
901 CATAGATGCC ATGCTTAAAG TAACACAAC TAATGAATTC AAAGCCTATG GTTTTTCTCA
961 GGCCACTGTG ATCAAGTCGA CAGTCTTGAG TTTGATCTTA GATGGAAATG ACACAACCGC
1021 TGTTCAATTT ATATGGGTAA TGTCTTATT ACTGAACAAT CCACATGTTA TGAACAAGG
1081 CCAAGAAGAG ATAGACATGA AAGTGGGTAA AGAGAGGTGG ATTGAAGATA CTGACATAAA
1141 AAATTTAGTG TACCTTCAGG CTATCGTTAA AGAGACATGG CGCTTGATC CACCTGTTCC
1201 TTTTCTTTTA CCACACGAAG CAGTGCAAGA TTGTAAAGTG ACTGTTTACC ACATTCCTAA
1261 AGGTACTCGT CTATATATCA ATGCGTGGAA AGTACATCGC GATTCTGAAA TTTGGTCAGA
1321 GCCCAGAAAG TTTATGCCCA ATAGATTCTT GACTAGCAAA GCAAAATATAG ATGCTCGCGG
1381 TCAAATTTT GAATTTATAC CGTTTGGTTC TGGGAGACGG TCATGTCCAG GGTTAGGTTT
1441 TGCAGCTTTA GTGACACATC TGACTTTTGG TCGCTTGCTT CAAGGTTTTG ATTTTAGTAA
1501 GCCATCAAAC ACGCCAATTG ACATGACAGA AGGCGTAGGC GTTACTTTGC CTAAGGTTAA
1561 TCAAGTTGAA GTTCTAATTA CCCCTCGTTT ACCTTCTAAG CTTTATTTAT TTTGAAAGTG
1621 CAAATCATCA ATCATGGGTT GAGTAATTAG TGATACT

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SEQ. ID. NO. 270

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1  MDYHISFHFQ ALLGLLAFVF LSILWRRTL TSRKLAPEIP GAWPIIGHLR QLSGTDKNIP
61 FPRILGALAD KYGPVFTLRI GMPYPLIVNN WEAAKDCLTT HDKDFAAAPT SMAGESIGYK
121 YARFTYANFG PYYNQVRKLA LQHVLSSTKL EKMKHIRVSE LETSIKELYS LTLGKNNMQK
181 VNISKWFQEL TLNIIIVKTIC GKRYSNIEED EEAQRFERKAF KGIMFVVGQI VLYDAIPFPL
241 FKYFDQGHQI QLMNKIYKDL DSILQGWLDD HMMNKDVNNK DQDAIDAMLK VTQLNEFKAY
301 GFSQATVIKS TVLSLILDGN DTTAVHLIWW MSLLLNNPHV MKQGQEEIDM KVGKERWIED
361 TDIKNLVYLQ AIVKETLRLY PPVPFLPHE AVQDCKVTGY HIPKGTRLYI NAWKVHRDSE
421 IWSEPEKFMF NRFLTISKANI DARGQNFEFI PFGSGRRSCP GLGFATLVTH LTFGRLLQGF
481 DFSKPSNTPI DMTEGVGVTL PKVNQVEVLI TPRLPSKLYL F

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FIG. 136

NAME D283-AC1
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 271

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1 AGAGAGTGAA AATGGACGCA CTACTTCAA TGACAGTAAC AGCATCTTGT GCTGCCATAG
61 TAATTACTCT GCTGGTGTGT ATATGGAGAG TGCTGAACTG GATTTGGTTC AGACCAAAGA
121 AATTGGAGTT GTTGTGAGAA AAACAAGGTT TGGGAAGGAAA TTCTTACAAG GTTTTGTATG
181 GGGACATGAA AGAGTTTTCT GGGATGATTA AGGAAGCATA CTCAAAGCCT ATGAGTCTAT
241 CTGATGATGT AGCACCAGA CTGATGCCTT TCTTCTTGA AACCATCAAA AAATATGGAA
301 AAAGATCCTT TATATGGTTT GGTCCAAGAC CACTAGTATT GATTATGGAT CCTGAGCTTA
361 TAAAGGAAGT ACTCTCAAAA ATCCATCTGT ATCAAAAGCC TGGTGGAAAT CCATTAGCAA
421 CACTATTGGT ACAAGGAATA GCAACCTATG AGGAAGACAA ATGGGCCAAA CATAGAAAAA
481 TCATCAATCC CGCTTTCCAT CTAGAGAAGC TAAAGCTTAT GCTTCCAGCA TTTTCGTTAA
541 GCTGTAGTGA GATGCTGAGC AAATGGGAAG ACATTGTTTC AGCTGATAGC TCACATGAGA
601 TAGATGTATG GTCTCACCTT GAGCAATTGA CTTGCGATGT GATCTCTCGG ACAGCTTTTG
661 GCAGTAGTTA TGAAGAAGGT AGAAAGATTT TTGAACTCA AAAGGAACAA GCTCAGTATC
721 TTGTGGAAAG TTTCCGCTCC GTTTATATCC CAGGAAGGAG ATTTTGTGCA ACAAGAGGGA
781 ATAGAAGAAT GAAGGAAATA AAAAAGGATG TCCGGGCATC AATTAAGGT ATTATTGATA
841 AAAGATTGAA GGCAATGAAA GCAGGGGACA CCAATAATGA GGATCTATTG GGTATATTAC
901 TGGAAATCGA TATTAAGAA ATTGAACAGC ACGGAAACAA GGATTTTGA ATGAGCATTG
961 AAGAAGTATG TGAAGAATGC AAGTTATTCT ATTTTGCTGG CCAAGAAACT ACATCAGTGT
1021 TACTCCTATG GTCTCTAGTG TTGTTGAGCA GGTATCAAGA TTGGCAGGCA CGGGCCAGAG
1081 AAGAAATCTT GCAAGTCTTT GGCAGTCGAA AACCAGATTT TGACGGATTA AATCATCTAA
1141 AAATGTGAC AATGATCTTG TACGAGTCTT TAAGGCTGTA TCCCTCACTA ATAACACTTA
1201 CCCGCCGGTG TAATGAAGAC ATTGTATTAG GAGAACTATC TCTACCAGCT GGTGTTCTAG
1261 TCTCTTTGCC ATTGATTTTG TTGCATCATG ATGAAGAGAT ATGGGGTGAA GATGCAAAGG
1321 AGTTCAAACC AGAGAGATTT AGAGAAGGAA TATCAAGTGC AACAAAGGGT CAACTCACAT
1381 ATTTTCCATT TAGCTGGGGT CCTAGAATAT GTATTGGACA AAATTTTGCC ATGTTAGAAG
1441 CAAAGATGGC TCTGTCTATG ATCCTGCAAC GCTTCTCTTT TGAAGTGTCT CCGTCTTATG
1501 CACATGCCCC TCGGTCCATA ATAACCGTTC AGCCTCAGTA TGGTGTCCA CTTATTTTCC
1561 ACAAACTATA ATTTTGGTAC TTCTACTAAT ATTTTAGGGT TTATTCAGAC TCAAAAAAAA

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SEQ. ID. NO. 272

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1 MTVTASCAAI VITLLVCIWR VLNWIWFRPK KLELLLRKQG LEGNSYKVLY GDMKEFSGMI
61 KEAYSKPMSL SDDVAPRLMP FFLETIKKYG KRSFIWFGPR PLVLIMDPPEL IKEVLSKIHL
121 YQKPGGNPLA TLLVQGIATY EEDKWAKHRK IINPAFHLEK LKMLPAFRL SCSEMLSKWE
181 DIVSADSSHE IDVWSHLEQL TCDVISRTAF GSSYEGRKI FELQKEQAQY LVEVFRSVYI
241 PGRRLPTKR NRRMKEIKKD VRASIKGIID KRLKAMKAGD TNNEDLLGIL LESNIKEIEQ
301 HGNKDFGMSI EEVIEECKLF YFAGQETTSV LLLWSLVLLS RYQDWQARAR EEILQVFGSR
361 KPDPDGLNHL KIVTMILYES LRLYPSLITL TRRCNEDIVL GELSLPAGVL VSLPLILHH
421 DEEIWGEDAK EFKPERFREG ISSATKGQIT YFPFSWGPRI CIGQNFAMLE AKMALSMILQ
481 RFSFELSPSY AHAPRSIITV QPQYGAPLIF HKL

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FIG. 137

NAME D244-AB6
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 273

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1 TGCAATATAG TTTTCCTAGT CAGTTCTAGC CTCCTTTTCC TTAGAAATAA TGGATTATCA
61 TATTTCTTTC CATTTTCAAG CTCTTTTAGG GCTTTTAGCC TTTGTGTTCT TGTCTATTAT
121 CTTATGGAGA AGAACACTCA CTTCAAGAAA ATTAGCCCTT GAAATCCCAG GGGCATGGCC
181 TATTATAGGC CATCTTCGTC AGCTGAGTGG TACTGATAAG AATATCCCAT TTCCCCGAAT
241 ATTGGGCGCT TTGGCAGATA AATATGGACC TGTCTTCACA CTGAGAATAG GGATGTACCC
301 CTATTTGATT GTCACAACAT GGAAGCAGC TAAGGATTGT CTCACAACGC ATGATAAGGA
361 CTTggCTGCC CGACCAACTT CTATGGCTGG TGAAAGCATC GGGTACAAGT ATGCGAGGTT
421 TACTTATGCT AATTTTGGTC CTTATTATAA CCAAGTGC GC AACTAGCCC TACAACATGT
481 ACTCTCGAGT ACTAACTCG AGAAAATGAA ACACATACGT GTTCTGAAT TGGAACTAG
541 CATCAAAGAA TTATATTCTT TGACGCTGGG CAAAAACAAC ATGCAAAAAG TGAATATAAG
601 TAAATGGTTT GAACAATTGA CTTTAAACAT AATCGTGAAG ACAATTTGTG GCAAGAGATA
661 TAGCAACATA GAGGAGGATG AAGAGGCACA ACGTTTCAGA AAGGCATTTA AGGGCATCAT
721 GTTTGTTGTA GGGCAAATTG TTTTATATGA CGCAATTCCA TTCCCATTGT TCAAATACTT
781 TGATTTCCAA GGTATATAC AATTGATGAA CAAAATTTAT AAAGACTTAG ATTCTATTCT
841 TCAAGGATGG TTGGATGATC ATATGATGAA CAAGGATGTA AACAAATAGG ATCAAGATGC
901 CATAGATGCC ATGCTTAAAG TAACACAAC TAAATGAATC AAAGCCTATG GTTTTCTCA
961 GGCCTACTGTG ATCAAGTCGA CAGTCTTGAG TTTGATCTTA GATGGAATG ACACAACCGC
1021 TGTTCAATTG ATATGGGTAA TGCTCTATT ACTGAACAAT CCACATGTTA TGAACAAGG
1081 CCAAGAAGAG ATAGACATGA AAGTGGGTAA AGAGAGGTGG ATTGAAGATA CTGACATAAA
1141 AAATTTAGTG TACCTTCAGG CTATCGTTAA AGAGACATG CGCTTGTATC CACCTGTTCC
1201 TTTTCTTTTA CCACACGAAG CAGTGCAGA TTGTAAAGTG ACTGGTTACC ACATTCCTAA
1261 AGGTACTCGT CTATATATCA ATGCGTGAA AGTACATCGC GATCCTGAAA TTTGGTCAGA
1321 GCCCGAAAAG TTTATGCCCA ATAGATTCTT GACTAGCAAA GCAAAATATAG ATGCTCGCGG
1381 TCAAAATTTT GAATTTATAC CGTTTGGTTC TGGGAGACGG TCATGTCCAG GGATAGGTTT
1441 TGCGACTTTA GTGACACATC TGACTTTTGG TCGCTTGCTT CAAGGTTTTG ATTTTAGTAA
1501 GCCATCAAAC ACGCCAAATG ACATGACAGA AGGCGTAGGC GTTACTTTGC TTAAGGTTAA
1561 TCAAGTTGAA GTTCTAATTA CCCTCGTTT ACCTTCTAAG CTTTATTAT TTTGAAGGTG
1621 CAAATCATCA ATCATGGCTT GAGTAATTAG TTATACTTTA ATATGTTTCT C

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SEQ. ID. NO. 274

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1 MDYHISHFQ ALLGLLAFVF LSIILWRRTL TSRKLAPEIP GAWPIIGHLR QLSGTDKNIP
61 FPRILGALAD KYGPVFTLRI GMPYLIYVNN WEAAKDCLTT HDKDLAARPT SMAGESIGYK
121 YARETYANFG PYYNQVRKLA LQHVLSSTKL EKMKHIRVSE LETSIKELY S LTLGKNNMQK
181 VNISKWFEQL TLNIIIVKTC GKRYSNIEED EEAQRFRKAF KGIMFVVGQI VLYDAIPFPL
241 FKYFDFQGHI QLMNKIYKDL DSILQGWLDD HMNKNKDVNNK DQDAIDAMLK VTQLNEFKAY
301 GFSQATVIKS TVLSLILDGN DTTAVHLI WV MSLLLNNPHV MKQQQEEIDM KVKERWIED
361 TDIKNLVLYQ AIVKETLRLY PPVPFLLPHE AVQDCKVTGY HIPKGTRLYI NAWKVHRDPE
421 IWSEPEKEMP NRFLTSKANI DARGQNFEEI PFGSGRRSCP GIGFATLVTH LTFGRLLQGF
481 DFSKPSNTP I DMTEGVGVTL PKVNQVEVLI TPRLESKLYL F

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FIG. 138

NAME D205-BE9
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 275

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1 TTTGATTCAA CCATGGAGAA CCAATACTCC TACTCATTCT CTCTCTACTT CTACTTAGCT
61 ATAGTACTGT TTCTTCTTCC AATTTTGGTC AAATATTTCT TCCATCGGAG AAGAAATTTA
121 CCTCCAAGTC CATTCTCTCT TCCAATAATT GGTCACTTTT ACCTTCTCAA GAAAACCTCTC
181 CATCTCACTC TAACATCCTT ATCAGCTAAA TATGGTCCTG TTTTATACCT CAAATTGGGC
241 TCTATGCTG TGATTGTTGT GTCCTCACCA TCTGCTGTTG AAGAATGTTT AACCAAGAAT
301 GATATCATAT TCGCAAATAG GCCCAAGACC GTGGCTGGTG ACAAGTTTAC CTACAATTAT
361 ACTGTTTATG TTTGGGCACC CTATGGCCAA CTTTGGAGAA TTCTTCGCCG ATTAACGTGC
421 GTTGAACCTCT TCTCTTCACA TAGCCTACAG AAAACTTCTA TCCTTAGAGA TCAAGAAGTT
481 GCAATATTTA TCCGTTCTGT ATACAAATTC TCAAAGGATA GTAGCAAAAA AGTCGATTTG
541 ACCAACTGGT CTTTTACTTT GGTTTTCAAT CTTATGACCA AAATTATTGC TGGGAGACAT
601 ATTTGGAAGG AGGAAGATGC TGGCAAGGAA AAGGGCATTG AAATTATTGA AAAACTTAGA
661 GGGACTTTCT TAGTAACCTC ATCATTCTTG AATATGTGTG ATTTCTTGCC AGTATTCAGG
721 TGGGTTGGTT ACAAAAGGCCA GGAGAAGAAG ATGGCCTCAA TTCACAATAG AAGAAATGAA
781 TTCTTGAACA GCTTGCTTGA TGAATTTGCA CACAAGAAAA GTAGTGCTTC ACAATCTAAC
841 ACAACTGTTG GAAACATGGA GAAGAAAACC AACTGATTG AAAAGCTCTT GTCTCTTCAA
901 GAATCAGAGC CTGAATTCTA CACTGATGAT ATCATCAAAA GTATTATGCT GGTAGTTTTT
961 GTTGCAAGAA CAGAGACCTC ATCAACAACC ATCCAATGGG TAATGAGGCT TCTGTAGCT
1021 CACCTGAGG CATTGTATAA GCTACGAGCT GACATTGACA GTAAAGTTGG GAATAAGCGC
1081 TTGCTGAATG AATCAGACCT CAACAAGCTT CCGTATTTGC ATTGTGTTGT TAATGAGACA
1141 ATGAGATTAT ACACTCCGAT ACCACTTTTA TTGCCTCATT ATTCAACTAA AGATTGTATT
1201 GTGGAAGGAT ATGATGTACC AAAACATACA ATGTTGTTTG TCAACGCTTG GGCCATTAC
1261 AGGGATCCCA AGGTATGGGA GGAGCCTGAC AAGTTCAAGC CAGAGAGATT TGAGGCAACA
1321 GAAGGGGAAA CAGAAAGGTT CAATTACAAG CTTGTACCAT TTGGAATGGG GAGAAGAGCG
1381 TGCCCTGGAG CTGATATGGG GTTGCAGACA GTTTCTTTGG CATTAGGTGC ACTTATTCAA
1441 TGCTTTGACT GGCAAATTGA GGAAGCGGAA AGCTTGGAGG AAAGCTATAA TTCTAGAATG
1501 ACTATGCAGA ACAAGCCTTT GAAGGTTGTC TGCACTCCAC GCGAAGATCT TGGCCAGCTT
1561 CTATCCCAAC TCTAAGGCAA TTTATCAATG CCAAACGTAA TCTTCATCTA CCACATATG

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SEQ. ID. NO. 276

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1 MENQSYSFS SYFYLAIVLF LLPILVKYFF HRRRNLPSP FSLPIIGHLY LLKTLHLTL
61 TSLSAKYGPV LYLKLGSMPV IVVSSPSAVE ECLTKNDIIF ANRPKTVAGD KFTYNYTVYV
121 WAPYGQLWRI LRRLTVVELF SSHSLQKTSI LRDQEVAFI FSLYKFSKDS SKKVDLTNWS
181 FTLVFNLMTK IAGRHIVKE EDAGKEKGIE IIEKLRGTFL VTTSFLNMC DFLPVFRWVG
241 KGQEKMASI HNRNREFLNS LLDEFRRHKS SASQSNNTVG NMEKKTTLIE KLLSLQSESE
301 EFTYDDIIS IMLVVFVAGT ETSSTTIQWV MRLLVAHPEA LYKLRADIDS KVNKRLLNE
361 SDLNKLPHY CVVNETMRLY TPIPLLLPHY STKDCIVEGY DVPKHTMLFV NAWAIHRDEK
421 VWEEDPKFKP ERFEATEGET ERFNYKLVFF GMGRRACPGA DMGLRAVSLA LGALIQCFDW
481 QIEEAESLEE SYNRMQM QN KPLKVCTPR EDLGQLLSQL

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FIG. 139

NAME D136-AF4
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 277

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1 CCTTTTAAAG ATGTATTTAA GATTAAAGAT TTAAGATGAA GCAACTGAGG TAAGTCCTTT
61 CAAGGAGTAG TTGTCACTTC TGAGAAATGGA GATGATGTAC AGCATAATAG CAGCAGCCAG
121 TATTGCAATT ATCTTGGTAT ATACATGGAA AGTGTGTAAT TGGGCTTGGT TTGGGCCGAA
181 GAAATGGAG AAATGCTTAA GACAGAGGGG TCTCAAGGGA AATCCTTATA AGCTACTCTA
241 TGGAGATCTA AACGAAGTGA CAAAAAGCAT AATAGAAGCC AAGTCTAAGC CCATCAATTT
301 CTCTGATGAT ATTGCTCAAA GGCTCATCCC TTTTTCCTT GACGCCATCA ACAAAAATGG
361 TAAAACTCC TTCGTCTGGC TTGGACCGTA TCCAATAGTG TTGATCACGG ATCCTGAGCA
421 TTTAAAGGAG ATTTTCACAA AGAATTATGT GTATCAAAAG CAAACTCATC CCAATCCATA
481 CGCCAAGCTA TTAGCTCACG GTCTTGTCAG CCTTGAGGAA GACAAATGGG CCAAAACACAG
541 AAAAAATCATT AGTCTGCGCT TCCATGTCGA GAAGCTAAAG CATATGCTGC CTGCATTTTA
601 TCTGAGTTGT AGTGAAATGA TAAGCAAATG GGAGGAGGTT GTTCCAAAAG AAACATCATT
661 CGAGCTCGAT GTATGGCCAG ACCTTCAAAT AATGACCAAT GAAGTCATT CTGCACTGC
721 ATTTGGGAGT AGCTATGAAG AAGGAAGAAT AGTATTTGAA CTTCAGAAAG AACAAGCTGA
781 GTATGTAATG GACATAGGAC GTTCAATTTA TATACCAGGA TCAAGGTTCT TGCCTACTAA
841 AAGGAACAAA AGAATGCTGG AATTGAAAA GCAAGTGCAA ACAACAATTA GCGGTATCAT
901 CGACAAAAGA TTGAAGGCCAA TGGAGAAGAG GGAGACTAGT AAAGATGACT TATTAGGCAT
961 ATTACTTGAA TCCAATTTGA AAGAAATGA ACTTCATGGA AGAATGACT TGGGAATAAC
1021 AACGTCAGAA GTGATTGAAG AGTGCAAGTT ATTCTATTTT GCCGGCCAAG AGACCACTTC
1081 AGTGTTGCTT GTTTGGACAA TGATTTTGTT GTGCTTACAT CCAGAGTGGC AAGTACGTGC
1141 CAGAAAGGAA GTGTTGCAGA TCTTTGGAAA TGATAAACCA GATTTGGAAG GACTAAGTCG
1201 CTTGAAAATT GTAACAATGA TCTTGTACGA GACGTTACGC CTATCCCCC CATTACCAGC
1261 ATTTGGTAGA AGGAACAAAG AAGAAGTCAA ATTAGGGGAG CTACATCTAC CGGCTGGAGT
1321 GTTACTCGTT ATACCAGCAA TCTTAGTACA TTATGATAAG GAAATATGGG GTGAAGATGC
1381 AAAGGAATTC AAACCAGAAA GATTCAGTGA AGGAGTGTCA AAGGCAACAA ATGGACAAGT
1441 CTCATTTATA CCATTTAGCT GGGGACCTCG TGTTTGCATT GGACAAAAC TCGCAATGAT
1501 GGAAGCAAAA ATGGCAGTAA CTATGATACT ACAAAAATTC TCCTTTGAAC TATCCCCCTC
1561 TTATACACAT GCTCCATTTG CAATTGTGAC TATTCATCCC CAGTATGGTG CTCTCTGCT
1621 TATGCGCAGA CTTTAAACAA TATGTTGCTG ATATTTAAGA TCAGTGGCGT TTTATT

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SEQ. ID. NO. 278

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1 MEMMYSIIAA ASIAIILVYT WKVLNWAFFG PKKMEKCLRQ RGLKGNPYKL LYGDLNELTK
61 SIIEAKSKPI NFSDDIAQRL IPFFLDAINK NGKNSFVWLG PYPVILITDP EHLKEIFTKN
121 YVYQKQTHPN PYAKLLAHGL VSLEEDKWAK HRKIIISPAFH VEKLKHMLPA FYLSCESEMIS
181 KWEEVVPKET SFELDVWPD LQIMTSEVISR TAFGSSYEAG RIVFELQKEQ AEYVMDIGRS
241 IYIPGSRFLP TKRNKRMLEI EKQVQTIRI IIDKRLKAME EGESKDDLL GILLESNLKE
301 IELHGRNDLG ITTSEVIEEC KLFYFAGQET TSVLLVWTMI LLCLHPEWQV RARKEVLQIF
361 GNDKPDLEGL SRLKIVTMIL YETLRLFPPL PAFGRNRNKEE VKLGELHPLA GVLLVIPAIL
421 VHYDKEIWGE DAKEFKPERF SEGVSKATNG QVSFIPFSWG PRVCIGQNFA MMEAKMAVTM
481 ILQKFSFELS PSYTHAPFAI VTIHPQYGAP LLMRRL

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FIG. 140

NAME D101-BA2
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 279

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1 CTAATTTTCA TATACCTTTA GTACTCTTGA AATTTTCAAA TAATGGTTTA TCTTCTTTCT
61 CCCATAGAAG CCATTGTAGG ATTTGTAACC TTTTCATTTC TATTCTACTT TCTATGGACC
121 AAAAAACAAT CAAAAATCTT AAACCCACTA CCTCCAAAAA TCCCAGGTGG ATGGCCAGTA
181 ATCGGCCATC TCTTTTATTT CAAGAACAAT GGCATGAAG ATCGCCATT TTTCTAAAAA
241 CTCGGTGAAT TAGCTGACAA ATATGGTCCC GTCTTCACTT TCCGGTTAGG GTTTCGCCGT
301 TTCTTGCGCG TGAGTAGTTA TGAAGCTATG AAAGAATGCT TCACTACCAA TGATATCCAT
361 TTCGCCGATC GGCCATCTTT ACTCTACGGA GAATACCTTT GCTATAATAA TGCCATGCTT
421 GCTGTTGCCA AATATGGCCC TTACTGGAAA AAAAATCGAA AGTTAGTCAA TCAAGAAGTT
481 CTCTCCGTTA GTCGGCTCGA AAAATTCAAA CATGTTAGAT TTTCTATAAT TCAGAAAAAT
541 ATTAAACAAT TGTATAATTG TGATTCACCA ATGGTGAAGA TAAACCTTAG TGATTGGATA
601 GATAAATTGA CATTGCGACAT CATTTTGAAA ATGGTTGTTG GGAAGAACTA TAATAATGGA
661 CATGGAGAAA TACTCAAAGT TGCTTTTCAG AAATTCATGG TTCAAGCTAT GGAGATGGAG
721 CTCTATGATG TTTTTCACAT TCCATTTTTC AAGTGGTTGG ATCTTACAGG GAATATTAAG
781 GCTATGAAGC AAACCTTCAA AGACATTGAT AATATTATCC AAGGTTGGTT AGATGAGCAC
841 ATTAAGAAGA GAGAAACAAA GGATGTTGGA GGTGAAAACG AACAAGATTT TATAGATGTG
901 GTGCTTTCCA AGATGAGCGA CGAACATCTT GCGGAGGGTT ACTCTCATGA CACAACCATC
961 AAAGCAACTG TATTCACTTT GGTCTTGGAT GCAACAGACA CACTTGCATC TCATATAAAG
1021 TGGGTAATGG CGTTAATGAT AAACAATAAG CATGTCATGA AGAAAGCACA AGAAGAGATG
1081 GACACAATTG TTGGTAGAGA TAGATGGGTA GAAGAGAGTG ATATCAAGAA TTTGGTGAT
1141 CTCCAAGCAA TTGTTAAAGA AGTATTACGA TTACATCCAC CTGCACCTTT GTCAAGTCAA
1201 CACCTATCTG TGGAGATTG TGTTGTCAAT GGGTACCATA TTCCTAAGGG GACTGCACTA
1261 CTTACCAATA TTATGAAACT ACAGCGAGAT CCTCAAACAT GGCCAAATCC TGATAAATTC
1321 GATCCAGAGA GATTCTGAC GACTCATGCT ACTATTGACT ACCGCGGGCA GCCTATGAG
1381 TTGATCCCTT TTGGTACGGG GAGACGAGCT TGTCGCCGCA TGAATTATTC ATTGCAAGTG
1441 GAACACCTTT CAATTGCTCA TATGATCCAA GGTTCAGTT TTGCAACTAC GACCAATGAG
1501 CCTTTGGATA TGAACAAGG TGTGGGTTA ACTTTACCAA AGAAGACTGA TGTGAAGTT
1561 CTAATTACCC CTCGTTT

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SEQ. ID. NO. 280

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1 MGYLLSPIEA IVGFVTFSL FYFLWTKKQS KILNPLPKI PGGWPVIGHL FYFKNNGDED
61 RHFSQKLGDL ADKYGPVFTF RLGFRRLAV SSYEAMKECF TTNDIHFADR PSLLYGEYLC
121 YNNAMLAVAK YGPYWKNNRK LVNQEVLSVS RLEKFKHVRF SIIQKNIKQL YNCDSPMVKI
181 NLSWDIDKLT FDIILKMVVG KYNNGHGEI LKVAQKFMV QAMEMELYDV FHIPFFKWLD
241 LTGNIKAMKQ TFKDIDNIIQ GWLDEHIKKR ETKDVGGENE QDFIDVVLK MSDEHLGEGY
301 SHDTTIKATV FTLVLDATDT LALHIKWMVA LMINKHVMK KAQEEMDTIV GRDRWVEESD
361 IKNLVYLQAI VKEVLRHPP APLSVQHLSV EDCVVNGYHI PKGTALLNI MKLQRDPQW
421 PNPDKFDPER FLTTHATIDY RGQHYELIFF GTGRRACPA MYSLQVEHLS IAHMIQGFSE
481 ATTTNEPLDM KQGVGLTLPK KTDVEVLITP R

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FIG. 141

NAME D130-AA1
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 281

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1 CTTTTTCTCC CCAAAAAAGA GCTCATTTC CTTGTCCCCA AAAATGGATC TTCTCTTACT
61 AGAGAAGACC TTAATTGGTC TCTTCTTTGC CATTTTAATC GCTGTAATTG TCTCTAGACT
121 TCGTTCAAAG CGTTTTAAGC TTCCCCCAGG ACCAATCCCA GTACCAGTTT TTGGTAATTG
181 GCTTCAAGTT GGTGATGATT TAAACCACAG AAATCTTACT GATTTTGCCA AAAAATTTGG
241 TGATCTTTTC TTGTTAAGAA TGGGCCAGCG TAATTTAGTT GTTGTGTCAT CTCCTGAATT
301 AGCTAAAGAA GTTTTACACA CACAAGGTGT TGAATTTGGT TCAAGAACAA GAAATGTTGT
361 ATTTGATATT TTTACTGGAA AAGGTCAAGA TATGGTTTTT ACTGTATATG GTGAACACTG
421 GAGAAAAATG AGGAGAATTA TGACTGTACC ATTTTCTACT AATAAAGTTG TGCAGCAATA
481 TAGAGGGGGG TGGGAGTTTG AAGTGGCAAG TGTAATTGAG GATGTGAAGA AAAATCCTGA
541 ATCTGCTACT AATGGGATTG TATNAAGGAG GAGATTACAA TTGATGATGT ATAATAATAT
601 GTTTAGGATT ATGTTTGATA GGAGATTGA GAGTGAAGAT GATCCTTTGT TTGTTAAGCT
661 TAAGGCTTTG AATGGTGAAA GGAGTAGATT GGCTCAGAGT TTTGAGTATA ATTATGGTGA
721 TTTTATTCCC ATTTTGAGGC CTTTTTGAG AGGTATTATTG AAGATCTGTA AAGAAATTAA
781 GGAGAAGAGG CTGCAGCTTT TCAAAGATTA CTTTGTTGAT GAAAGAAAGA AGCTTTCAAA
841 TACCAAGAGC TTGGACAGCA ATGCTCTGAA ATGTGCGATT GATCACATTC TTGAGGCTCA
901 ACAGAAGGGG GAGATCAATG AGGACAACGT TCTTTACATT GTTGAAAAACA TCAATGTTGC
961 TGCTATAGAA ACCACATTAT GGTC AATTGA GTGGGGTATC GCCGAGTTAG TCAACCACCC
1021 TCACATCCAA AAGAAACTCC GCGACGAGAT TGACACAGTT CTTGGCCCAG GAGTGCAGT
1081 GACTGAACCA GACACCCACA AGCTTCCATA CCTTCAGGCT GTGATCAAGG AGACGCTTCG
1141 TCTCCGTATG GCAATTCTTC TATTAGTCCC ACACATGAAC CTTACCGATG CAAAGCTTGG
1201 CGGGTTTGAT ATTCCAGCAG AGAGCAAAAT CTTGGTTAAC GCTTGGTGGC TAGCTAACAA
1261 CCCGGCTCAT TGGAGAAAGC CCGAAGAGTT CAGACCCGAG AGGTTCTTCG AAGAGGAGAA
1321 GCACGTTGAG GCCAATGGCA ATGACTTCAG ATATCTTCCG TTTGGCGTTG GTAGGAGGAG
1381 TTGCCCTGGA ACTATACTTG CATTGCCAAT TCTTGGCATT ACTTTGGGAC GTTT

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SEQ. ID. NO. 282

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1 MDLLLLLEKTL IGLFFAILIA VIVSRLRSKR FKLPPGPPIPV PVFGNWLQVG DDLNHRNLTD
61 FAKKFGDLFL LRMGQRNLV VSSPELAKEV LHTQGVVEFGS RTRNVVDFIF TGKGQDMVFT
121 VYGEHWKMR RIMTVPFFTN KVVQYRGGW EFEEVASVIED VKKNPESATN GIVLRRRLQL
181 MMYNNMFRIM FDRRFESEDD PLFVKLKALN GERSRLAQSF EYNYGDFIPI LRPFLRGYLK
241 ICKEVKEKRL QLFKDYFVDE RKKLSNTKSL DSNALKCAID HILEAQQKGE INEDNVLYIV
301 ENINVAAIET TLWSIEWGIA ELVNHPHIQK KLRDEIDTVL GPGVQVTEPD THKLPYLQAV
361 IKETLRLRMA IPLLVPHMNL HDAKLGGFDI PAESKILVNA WWLANNPAHW KKPEEFRPER
421 FFEEKHVEA NGNDFRYLPF GVGRRSCEPT ILALPILGIT LGR

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FIG. 142

NAME D136-AD5
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 283

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1 CCAAAATTAGA GCAAGAAATT AACAACTCTA GTTACCTTCT CCCTTTTTTAA GAGTATTTAA
61 GATTTAAGAT TTAAGATGAA GCAACTGAGG TAAGTCCTTT CAAGGAGTAG TTGTCACCTTC
121 TGAGAAATGGA GATGATGTAC AGCATAATAG CAGCAGCCAG TATTGCAATT ATCTTGGTAT
181 ATACATGGAA AGTGTGTAAT TGGGCTTGGT TTGGGCCAAA GAAATGGAG AAATGCTTAA
241 GACAGAGGGG TCTCAAGGGA AATCCTTATA AGTACTCTA TGGAGATCTA AACGAAGTGA
301 CAAAAAGCAT AATAGAAGCC AAGTCTAAGC CCATCAATTT CTCTGATGAT ATTGCTCAAA
361 GGCATCATCCC TTTTTTCTT GACGCCATCA AAAAAATGG TAAAACTCC TTCGTCTGGC
421 TTGACCCTGA TCCAATAGTG TTGATCACGG ATCCTGAGCA TTTAAAGGAG ATTTTCACAA
481 AGAATTATGT GTATCAAAAG CAAACTCATC CCAATCCATA CGCCAAGCTA TTAGCTCACG
541 GTCTTGTGAG CTTGAGGAA GACAAATGGG CCAAACACAG AAAATCATT AGTCTGCCT
601 TCCATGTGGA GAAGCTAAAG CATATGCTGC CTGCATTTTA TCTGAGTTGT AGTGAAATGA
661 TAAGCAATG GGAGGAGGTT GTTCCAAAAG AAACATCATT CGAGCTCGAT GTATGGCCAG
721 ACCTTCAAAT AATGACCAAT GAAGTCATTT CTCGCACCTG ATTTGGGAGT AGCTATGAAG
781 AAGGAAGAAT AGTATTTGAA CTTGAGAAAG AACAGCTGA GTATGTAATG GACATAGGAC
841 GTTCAATTTA TATACCAGGA TCAAGTTCT TGCCTACTAA AAGGAACAAA AGAATGCTGG
901 AAATTGAAA GCAAGTGCAA ACAACAATTA GCGGTATCAT CGACAAAAGA TTGAAGGCAA
961 TGGGAAGAAG GCAGACTAGT AAAGATGACT TATTAGGCAT ATTACTTGAA TCCAATTTGA
1021 AAGAAATTGA ACTTCATGGA AGAAATGACT TGGGAATAAC AACATCAGAA GTGATTTGAAG
1081 AGTGCAAGTT AATCTATTTT GCCGGCCAAG AGACCCTTC AGTGTGTCTT GTTTGGACAA
1141 TGATTTTGTG GTGCTTACAT CCAGAGTGGC AAGTACGTGC CAGAAAGGAA GTGTGTCAGA
1201 CCTTTGGAAG TGATAAACCA GATTTGGAAG GACTAAGTCG CTTGAAAATT GTAACAATGA
1261 TCTTGTACGA GACGTTACGC CTATTCCCCC CATTACCAGC ATTTGGTAGA AGGAACAAAG
1321 AAGAAGTCAA ATTAGGGGAG CTACATCTAC CGGCTGGAGT GTTACTCGTT ATACCAGCAA
1381 TCTTAGTACA TTATGATAAG GAAATATGGG GTGAAGATGC AAAGGAATTC AAACCAGAAA
1441 GATTCAAGTGA AGGAGTGTCA AAGGCAACAA ATGGACAAGT CTCATTTATA CCATTTAGCT
1501 AGGGACCTCG TGTTTGCATT GGACAAAAC TCGCAATGAT GGAAGCAAAA ATGGCAGTAA
1561 CTATGATACT ACAAAAATTC TCCTTTGAAC TATCCCCTTC TTATACACAT GCTCCATTG
1621 CAATTGTGAC TATTCATCCC CAGTATGGTG CTCCTCTGCT TATGCGCAGA CTTTAAACA
1681 TATGTTGCTG ATATTTAAGA TCAGTGGCGT TTTATTCTCC ATG

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SEQ. ID. NO. 284

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1 MEMMYSIIAA ASIAIILVYT WKVLNWAFFG PKKMEKCLRQ RGLKGNPYKL LYGDLNELTK
61 SIIEAKSKPI NFSDDIAQRL IPFFLDANK NGKNSFVWL PYPIVLITDP EHLKEIFTKN
121 YVYQKQTHPN PYAKLLAHGL VSLEEDKWAK HRKIISPAFH VEKLKHLPA FYLSCSEMIS
181 KWEEVVPKET SFELDVWPD LQIMTSEVISR TAFGSSYE EG RIVFELQKEQ AEYVMDIGRS
241 IYIPGSRFLP TKRNKRML EI EKQVQTIR I IDKRLKAME EG ETSKDDLL GILLESNLKE
301 IELHGRNDLG ITTSEVIEEC KLIYFAGQET TSVLLVWTMI LLCLHPEWQV RARKEVLQTF
361 GNDKPDLEGL SRLKIVTMIL YETLRLFPPL PAFGRNRNKEE VKLGELHLPA GVLLVIPAIL
421 VHYDKEIWGE DAKEFKPERF SEGVSKATNG QVSFIPFS

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FIG. 143

NAME D138-AD12
ORGANISM NICOTIANA TABACUM
SEQ. ID. NO. 285

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1 TTTGCCTTGG CTCGTCATTG ATGACGACTT CATTTTGTTC TCTTCCCCAC GAAAAATGGTA
61 GATATGATAT GGAGGGACGT AGGGAAGAAT TACTGGGACA AACCTAGTGA GTGAAAATGG
121 AAACAGTTGA AATGATAGTA AAAGTATCTT GTGCTGCCAT AGTAATTACT CTGTTGGTGT
181 GTCTATGGAG AGTGTGTAAT TGGGTTTGGT TCAGACCAAA GAAATTAGAG AAGTTGTGTGA
241 GAAACAGGT TTTGTATGGG GACATGAAAG AGTTTCTGG GATGATTAAG GAAGCATACT
301 CAAAGCCTAT GAGTCTGTCT GATGATGTAG CACCACGAAT GATGCCTTTC TTTCTTGAAA
361 CCATCAAGAA ATATGAAAAA AGATCCTTTA TATGGTTCGG TCCAAGACCA CTAGTATTGA
421 TCATGGATCC TGAGCTTATA AAGGAAGTAC TCTCCAAAAT CTATCTTTAT CAAAAGCCCG
481 GTGGAATCC ATTAGCAACA CTATTGGTAC AAGGATTAGC AACCTATGAG GAAGACAAT
541 GGGCCAAACA TAGAAAAATC ATCAATCCCG CTTTCCATCT AGAGAAGCTA AAGCATATGC
601 TTCCAGCTTT TCGCTTGAGC TGTAGTGAGA TGCTGAGCAA ATGGGAAGAC ATTGTTTCAG
661 CTGAAGGCTC ACATGAGATA GATGTATGGC CTAACCTTGA GCAATTGAGT TGGCATGTGA
721 TCTCTCGGAC AGCTTTTGGC AATAGTTATG AAGAAGGTAG AAAGATTTT GAACCTCAAA
781 AGGAACAAAC TCAGCATCTT GTGGAAGCTT TCCGCTCTGT TTATATCCCA GGAAGGAGAT
841 TTTTGCCCAAC AAAGAGGAAT AGAAGAAATGA AGGAAATAAA AAAGGAGGTT CGAGCGTCAA
901 TTAAGGTAT TATTGATAAA AGATTGAAGG CAATGAAAGC AGGGGACACC AATAATGAGG
961 ATCTATTGGG ATATTGCTGG AATCAAATTT TAAAGAAATTT GAACAGCGCG GAAACAAGGA
1021 TTTTGGAATG AGCATTGAAG ATGTCATTGA AGAATGCAAG TTATTCTATT TTGCTGGCCA
1081 AGAAACTACA TCAGTGTGTC TCCTATGGTC TCTAGTGTCTG TTGAGCAGGT ATCAAGATTG
1141 GCAGACACGG GCCAGAGAAG AAGTCTTGCA TGTCTTTGGG AGTCGGAAC CAGATTTTGA
1201 TGAATTAAT CATCTAAAAG TTGTGACAAAT GATCATGTAC GAGTCTTTAA GGTATATCC
1261 CTCACATAATA ACACCTACCC GCCGGTGTA TGAAGACATT GTATTAGGAG AACTATCTCT
1321 ACCAGCTGGT GTCCTAGTCT CTTTGCCAAT GATTTTGTG CATCATGATG AAGAGATATG
1381 GGGTGAAGAT GCAAAGGAGT TCAAACCAGA GAGATTTAGA GAAGGATTGT CAAGTGCAAC
1441 AAAGGGTCAA CTTACATATT TTCCATTGG CTGGGGTCCT AGAATATGTA TTGGACAAAA
1501 TTTTGCCATG TTAGAAGCAA AGATGGCTCT GTCTATGATC CTGCAACGCT TCTCTTTTGA
1561 ACTGTCTCCG TCTTATGCAC ATGCCCCTCA GTCCATATTA ACCGTTTCAGC CTCATATGG
1621 TGCTCCACTT ATTTTCCACA AGCTATAATT TGGTACTTGT GAAAGGTGTC TTGTACAATA
1681 TGTTAGTAGA GTTTATTTCAG ACTTAGATAC ATGCTTC

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SEQ. ID. NO. 286

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1 METVEMIVKV SCAAIVITLL VCLWRVLNVV WFRPKKLEKL LKQVLYGDM KEFSGMIKEA
61 YSKPMSLSDD VAPRMPFFL ETIKKYGKRS FIWFGPRPLV LIMDP ELIKE VLSKIYLYQK
121 PGGNPLATLL VQGLATYEED KWAKHRKIIN PAFHLEKLKH MLPAFRLSCS EMLSKWEDIV
181 SAEGSHEIDV WPNLEQLSCD VLSRTAFGNS YEGRKIFEL QKEQTQHLVE AFRSVYIPGR
241 RFLPTKRNRR MKEIKKEVRA SIKGIIDKRL KAMKAGDTNN EDLLGYCWNQ ILKKNLSAET
301 RILE

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FIG. 144

NAME D216-AG8
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 287

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1 CCAAAATGCA GTTCTTCAAC TTCATTTCCT TTGTCCTTTT TGTGTCCTTC CTCTTTTAT
61 TAAGGAAATG GAAGAACTCC AATAGCCAAA CCAAAAAGATT GCCTCCAGGT CCATGGAAAT
121 TACCTGTACT TGGAAGCATG TTTCAATTGC TAGGTGGACC TCCACATCAT GTCCTTGGAG
181 ATTTAGCCAA AAAATATGGT CCACTTATGC ACCTTCAACT AGGTGAAGTT TCTGTAGTTT
241 CTGTTACTTC TCCTGAGATG GCAAAAGAAG TACTAAAAAC TCATGACCTC GCTTTTGCAT
301 CTAGGCCGTT ACTTTTGGCA GCCAAAATTG TCTGCTATAA TGGGACAGAC ATTGTCTTTT
361 CCCCTATGG CGATTATTGG AGACAAACGC GTAAAATTTG TCTCTTGGAA TTGCTCAGTG
421 CCAAAAATGT TAGGTCATTC AGCTCAGTCA GACGAGATGA AGTTTCCAT ATGATTGAAT
481 TTTTTCGAT CATCTTCTGG TAAGCCAGTT AATGTATCAA AAAGGATTTC TCTATTCACA
541 ACCTCTATGA CATGTAGATC AGCCTTTGGA CAAGAATACA AGGAGCAAGA CGAATTCGCA
601 CAACTAGTAA AAAAAGTGTG AAGCTTAATG GAAGGGTTTG ATGTTGCTGA TATATTCCTT
661 TCATTGAAGT TTCTTCATGT GCTCAGTGGA ATGAAGGCTA AAGTTATGGA TGCACACCAT
721 GAGTTAGATG CCATTCTTGA AAAAATTATC AATGAGCACA AGAAAATTGC AACTGGAAAG
781 AATAATAATG AATTAGGAGG TGAAGGATTA ATTGACGTAC TGCTAAGACT TATGAAAGAG
841 GGAGGCCCTT AATCCCCGAT CACCAACGAC AACATCAAG CTATTATTTT TGACATGTTT
901 GGTGCGGGAA CGGAAACTTC ATCAACCACA ATTGACTGGG CCATGGTCGA AATGATAAAG
961 AATCCAAGTG TATTGCTTAA AGCTCAAGCA GAGGTAAGAG AAGCCTTCAG AGAGAAAAGAA
1021 ACTTTTGATG AAAATGATGT CGAGGAGTTG AAATACTTAA AATTGGTTAT CAAAGAAACT
1081 TTCAGACTCC ATCCTCCATT TCCCCTTTTG CTCCAAGAG AATCTAGAGA AGAAACAGAT
1141 ATAAACGGCT ACACTATTCC TTTTAAACA AAACCTATGG TTAACGTTTC GGCTATTGGA
1201 AGAGATCCAA AATATTGGGA TGACGTGGAA AGTTTAAAGC CAGAGAGATT TGAGCACAAC
1261 TCTATGGATT TTATTGGTAA TAATTTTGAA TATCTTCCTT TTGGTAGTGG AAGGAGAATG
1321 TGCCCTGGGA TATCATTTGG TTTGGCTAAT GTTTATTTGC CACTAGCTCA ATTGTTATAT
1381 CATTTTGATT GGAAACTCCC TACTGGAATC AATTCAGTGT ACTTGGACAT GACTGAGTCG
1441 TCAGGAGTAA CTTGTGCTAG AAAGAGTGAT TTATACTTGA CTGCTACTCC ATATCAACTT
1501 TCTCAAGAGT GATGCAATGA TATCAACCTT TTGAATTTTC GTCAACCCCA CCAATAGTG

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SEQ. ID. NO. 288

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1 MQFFNFISFV FVFSFLFLLR KWKNSNSQTK RLPPGPWKLP VLGSFMHLLG GPPHHVLGDL
61 AKKYGPLMHL QLGEVSVVSV TSPEMAKEVL KTHDLAFASR PLLLAAKIVC YNGTDIVFSP
121 YGDYWRQTRK ICLLELSAK NVRSFSSVRR DEVFHMIEFF SIIFW

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FIG. 145

NAME D243-AB3
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 289

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1  CCCACCAAAA AAATCATTTT TCTCGTCTAA AATGGATCTT CTCTTACTAG AGAAGACCTT
61 AATTGGTCTT TTCTTTGCCA TTTTAATCGC TTTAATTGTC TCTAAACTTC GTTCAAAGCG
121 TTTTAAGCTT CCTCCAGGAC CAATTCCAGT ACCAGTTTTT GGTAATTGGC TTCAAGTTGG
181 TGATGATTTA AACCACAGAA ATCTTACTGA TTATGCCAAG AAATTTGGAG ATCTTTTCTT
241 GTTAAGAATG GGTCAACGTA ACTTAGTTGT TGTGTCATCT CCTGAATTAG CTAAAGAAST
301 TTTACACACA CAAGGTGTTG AATTTGGTTC AAGAACAAGA AATGTTGTGT TTGATATTTT
361 TACTGGAAAA GGTCAAGATA TGGTTTTTAC TGTATATGGT GAACATTGGA GAAAAATGAG
421 GAGAATTATG ACTGTACCAT TTTTACTAA TAAAGTTGTG CAACAGTATA GAGGGGGGTG
481 GGAGTTTGAG GTGGCAAGTG TAATTGAGGA TGTGAAAAAA AATCCTGAAT CTGCTACTAA
541 TGGGATCGTA TTAAGGAGGA GATTACAATT AATGATGTAT AATAATATGT TTAGGATTAT
601 GTTTGATAGG AGATTGAGA GTGAAGATGA TCCTTTGTTT GTTAAGCTTA AGGCTTTGAA
661 TGGTGAAAGG AGTAGATTGG CTCAAAGTTT TGAGTATAAT TATGGTGATT TTATTCCAAT
721 TTTGAGGCCT TTTTTTGAGA GGTTATTGTA AGATCTGTAA AGAAGTTAAG GAGAAGAGGC
781 TGCAGCTTTT CAAAGATTAC TTTGTTGATG AAAGAAAAGAA GCTTTCGAAT ACCAAGAGCT
841 CGGACAGCAA TGCCCTAAAA TGTGCGATTG ATCACATTCT TGAGGCTCAA CAGAAGGGAG
901 AGATCAATGA GGACAACGTT CTTTACATTG TTGAAAACAT CAATGTTGCT GCAATTGAAA
961 CAACATTATG GTCAATTGAG TGGGGTATCG CCGAGCTAGT CAACCACCTT CACATCCAAA
1021 AGAAACTGCG CGACGAGATT GACACAGTTC TTGGACCAGG AGTGCAAGTG ACTGAACCAG
1081 ACACCCACAA GCTTCCATAC CTTCAGGCTG TGATCAAGGA GGCCTTTCGT CTCCTGATGG
1141 CAATTCCTCT ATTAGTCCCA CACATGAACC TTCACGACGC AAAGCTTGGC GGGTTTGATA
1201 TTCCAGCAGA GAGCAAAATC TTGGTTAACG CTTGGTGGTT AGCTAACAAC CCGGCTCATT
1261 GGAAGAAACC CGAAGAGTTC AGACCCGAGA GGTTCTTTGA AGAGGAGAAG CATGTTGAGG
1321 CCAATGGCAA TGACTTCAGA TATCTCCGT TTGGCGTTGG TAGGAGGAGC TGCCCTGGAA
1381 TTATACTTGC ATTGCCAACT CTTGGCATCA CTTTGGGACG TTTGGTTTCA AACTTTGAGC
1441 TGTTCGCTCC TCCAGGCCAG TCGAAGCTCG ACACCACAGA GAAAGGTGGA CAGTTCAGTC
1501 TCCACATTTT GAAGCATTC ACCATTGTGT TGAAACCAAG GTCTTTCTGA ACTTTGTGAT
1561 CTTATTAATT AAGGGGTTCT GAAGAAATTT GATAGTGTG G

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SEQ. ID. NO. 290

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1  MDLLLLLEKTL IGLFFAILIA LIVSKLRSKR FKLPPGPPIV PVFGNWLQVG DDLNHRNLTD
61 YAKKFGDLFL LRMGQRNLV VSSPELAKEV LHTQGVFEFS RTRNVVFDFI TGKGQDMVFT
121 VYGEHWRKMR RIMTVPFFTN KVVQZYRGW EFEVASVIED VKKNPESATN GIVLRRRLQL
181 MMYNMFRIM FDRRFESEDD PLFVKLKALN GERSRLAQSF EYNYGDFIPI LRPFFERLFE
241 DL

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FIG. 146

NAME D250-AC11
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 291

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1 ATAATGCTCT TTCTACTCTT TGTAGCCCTT CCTTTCATTC TTATTTTCT TCTTCCTAAA
61 TTCAAAAATG GTGGAAATAA CAGATTGCCA CCAGGTCCTA TAGGTTTACC ATTCAATTGA
121 AATTTGCATC AATATGATAG TATAACTCCT CATATCTATT TTTGGAAACT TTCCAAAAAA
181 TATGGCAAAA TCTTCTCATT AAAACTTGCT TCTACTAATG TGGTAGTAGT TTCTTCAGCA
241 AAATTAGCAA AAGAAGTATT GAAAAACAA GATTAAATAT TTTGTAGTAG ACCATCTATT
301 CTTGGCCAAC AAAAAGTGC TTATTATGGT CGTGATATTG CTTTTCGACC TTATAATGAT
361 TATTGGAGAG AAATGAGAAA AATTTGTGTT CTTTCATCTT TTAGTTTAAA AAAAGTTCAA
421 TTATTAGTGC CAATTCGTGA AGATGAAGTT TTTAGAATGA TTAAGAAAAT ATCAAAACAA
481 GCTTCTACTT CACAAATTAT TAATTGAGT AATTAAATGA TTTCAATTAAC AAGTACAATT
541 ATTTGTAGAG TTGCTTTTGG TGTTAGGTTT GAAGAAGAAG CACATGCAAG GAAGAGATTT
601 GATTTTCTTT TGGCCGAGGC ACAAGAAATG ATGGCTAGTT TCTTTGTATC TGATTTTTTT
661 CCTTTTAA GTTAGATTGA CAAATTAAGT GGATTGACAT ATAGACTTGA GAGGAATTTT
721 AAGGATTTGG ATAATTTTGA TGAAGAACTC ATTGAGCAAC ATCAAAATCC TAATAAGCCA
781 AAATATATGG AAGGAGATAT TGTGATCTT TTGTACAAT TGAAGAAAGA GAAATTAACA
841 CCACCTTGATC TCACTATGGA AGATATAAAA GGAATTCTCA TGAATGTGTT AGTTGCAGGA
901 TCAGACACTA GTGCAGCTGC TACTGTTTGG GCAATGACAG CCTTGATAAA GAATCCTAAA
961 GCCATGAAAA AAGTCAATT AGAAATCAGA AAATCAGTTG GGAAGAAAGG CATTGTAAT
1021 GAAGAAGATG TCCAAACAT CCCTTATTTT AAAGCAGTGA TAAAGGAAAT ATTTAGATTG
1081 TATCCACCAG CTCCACTTTT AGTTCCAAGA GAATCAATGG AAAAAACCAT ATTAGAAGGT
1141 TATGAATTC GGCCAAGAAC CATAGTTCAT GTTAACGCTT GGGCTATAGC AAGGGATCCT
1201 GAAATATGGG AAAATCCAGA TGAATTTATA CCTGAGAGAT TTTTGAATAG CAGTATCGAT
1261 TACAAGGGTC AAGATTTTGA GTTACTTCCA TTTGGTGCAG GCAGAAGAGG TTGCCAGGT
1321 ATTGCACTTG GGGTTGCATC CATGGAACCTT GCTTTGTCAA ATCTTCTTTA TGCATTTGAT
1381 TGGGAGTTGC CTTATGGAGT GAAAAAGAA GACATCGACA CAAACGTTAG GCCTGGAATT
1441 GCCATGCACA AGAAAAACGA ACTTTGCCTT GTCCAAAAA AATTATTTAT AAATTATATT
1501 GGGACGTGGA TCTCATGCTA GTTCTGTGCG GTCAGCTAAG CTTA

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SEQ. ID. NO. 292

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1 MLFLLFVALP FILIFLLPKF KNGGNNRLPP GPIGLPFIGN LHQYDSITPH IYFWKLSKKY
61 GKIFSLKLAS TNVVVVSSAK LAKEVLKKQD LIFCSRPSIL GQQLSYYGR DIAFAPYNDY
121 WREMRKICVL HLFSLKKVQL FSPIREDEVF RMIKKISKQA STSQIINLSN LMISLTSTII
181 CRVAFGVREF EEAHARKRFD FLLAEAQEMM ASFFVSDFFP FLS.IDKLSG LTYRLERNFK
241 DLDNFYEELI EQHQPNPKPK YMEGDIVDLL LQLKKEKLT LDLTMEDIK ILNMVLVAGS
301 DTSAAATVWA MTALIKNPKA MEKVQLEIRK SVGKKGIVNE EDVQNIPIYFK AVIKEIFRLY
361 PPAPLLVPRE SMEKTILEGY EIRPRIVHV NAWAIARDE IWENPDEFIP ERFNLSIDY
421 KGQDFELLFP GAGRRGCPGI ALGVASMELA LSNLLYAFDW ELPYGVKKED IDTNVRPGIA
481 MHKKNELCLV PKKLFINYIG TWISC

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FIG. 147

NAME D205-AH4
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 293

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1 GTGAGGTTTG AATCCTCTGC CTCAATGAAA CTCACCAAAAT TGGTTTTCTA ATTTCCATCT
61 AAAATATTGT CCAAAGCTAA AGATTCTTTC TCCTTAAATA GTCACCTTTA GTGGTTCCCTC
121 TTCATTTTCAT AGCTCAATCT TTCTTATTTT GATTCAACCA TGGAGAACCA ATACTCCTAC
181 TCATTCTCTT CCTACTTCTA CTTAGCTATA GTACTGTTTC TTCTTCCAAT TTTGGTCAAA
241 TATTTCTTCC ATCGGAGAAG AAATTTACCT CCAAGTCCAT TTTCTCTTCC AATAATTGGT
301 CACCTTTACC TTCTCAAGAA AACTCTCCAT CTCACTCTAA CATCCTTATC AGCTAAATAT
361 GGTCTGTTT TATACCTCAA ATTGGGCTCT ATGCCTGTGA TTGTTGTGTC CTCACCATCT
421 GCTGTTGAAG AATGTTTAA CAAGAATGAT ATCATATTCTG CAAATAGGCC CAAGACCGTG
481 GCTGGTGACA AGTTTACCTA CAATTATACT GTTTATGTTT GGGCACCCCTA TGGCCAACCTT
541 TGGAGAATTC TTCGCCGATT AACTGTCGTT GAACTCTTCT CTTACATAG CCTACAGAAA
601 ACTTCTATCC TTAGAGATCA AGAAGTTGCA ATATTTATCC GTTCGTTATA CAAATTCTCA
661 AAGGATAGTA GCAAAAAAGT CGATTTGACC AACTGGTCTT TACTTTGGT TTTCAATCTT
721 ATGACCAAAA TTATTGCTGG GAGACATATT GTGAAGGAGG AAGATGCTGG CAAGGAAAAG
781 GGCATTGAAA TTATTGAAA ACTTAGAGGG ACTTTCCTAG TAACATACATC ATTCTTGAAT
841 ATGTGTGATT TCTTGCCAGT ATTCAGGTGG GTTGGTTACA AAGGGCTGGA GAAGAAGATG
901 GCCTCAATTC ACAATAGAAG AAATGAATTC TTGAACAGCT TGCTTGATGA ATTTGACAC
961 AAGAAAAGTA GTGCTTCACA ATCTAACACA ACTGTTGGAA ACATGGAGAA GAAAACCACA
1021 CTGATTGAAA AGCTCTTGTC TCTTCAAGAA TCAGAGCCTG AATTCTACAC TGATGATATC
1081 ATCAAAAAGTA TTATGCTGGT AGTTTTTGT GCAGGAACAG AGACCTCATC AACCAACATC
1141 CAATGGGTAA TGAGGCTTCT TGTAGCTCAC CCTGAGGCAT TGTATAAGCT ACGAGCTGAC
1201 ATTGACAGTA AAGTTGGGAA TAAGCGCTTG CTGAATGAAT CAGACCTCAA CAAGCTTCCG
1261 TATTTGCATT GTGTTGTTAA TGAGACAATG AGATTATACA CTCCGATACC ACTTTTATG
1321 CCTCATTATT CAACTAAAGA TTGTATTGTG GAAGGATATG ATGTACCAAA ACATACAATG
1381 TTGTTTGTC ACGCTTGGGC CATTACAGG GATCCCAAGG TATGGGAGGA GCCTGACAAG
1441 TTCAAGCCAG AGAGATTGGA GGCAACAGAA GGGGAAACAG AAAGGTTCAA TTACAAGCTT
1501 GTACCATTG GAATGGGGAG AAGAGCGTGC CCTGGAGCTG ATATGGGGTT GCGAGCAGTT
1561 TCTTTGGCAT TAGGTGCACT TATTCATGCT TTTGACTGGC AAATTGAGGA AGCGGAAAGC
1621 TTGGAGGAAA GCTATAATTC TAGAATGACT ATGCAGAAC AGCCTTTGAA GGTGTGCTGC
1681 ACTCCACGGC AAGATCTTGG CCAGCTTCTA TCCCAACTCT AAGGCAATTT ATCAATGCCA
1741 AACGTAATCT TCATCTACCA CTATG

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SEQ. ID. NO. 294

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1 MENQYSYSFS SYFYLAIVLF LLPILVKYFF HRRRNLPSP FSLPIIGHLY LLKTLHLTL
61 TSLSAKYGPV LYLKLGSMVP IVVSSPSAVE ECLTKNDIIF ANRPKTVAGD KFTYNYTVVY
121 WAPYQLWRI LRRLTVVELF SSHSLQKTSI LRDQEVAFI RSLYKFSKDS SKKVDLTNWS
181 FTLVFNLMTK ILAGRHIVKE EDAGKEKGIE IIEKLRGTFL VTTSFLNMCD FLPVFRWVG
241 KGLEKKMASI HNRNEFLNS LLDEFHKKKS SASQSNTTVG NMEKKTTLIE KLLSLQSESE
301 EFTYDDIIS IMLVVVFAGT ETSSTTIQWV MRLLVAHPEA LYKLRLIDS KVGKRLLE
361 SDLNKLPYLH CUVNETMRLY TPIPLLLPHY STKDCIVEGY DVPKHTMLFV NAWAIHRDEK
421 VWEEDKFKP ERFTEGET ERFNYKLVF GMGRRACPGA DMGLRAVSLA LGALIQCFDW
481 QIEEAESLEE SYNRMTEMQN KPLKVVCTPR EDLGQLLSQL

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FIG. 148

NAME D267-AF10
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 295

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1 AACATCCTTT CCTTCTTCCA AAAATGGAGC TTCAATCTTC TCCTTTCAAT TTAATTTCTT
61 TGTTCTCTCT CTTTCTCTTT CTTTTTATTG TAGTGAAGAA ATGGAATGCC AAAATCCCAA
121 AGTTACCTCC AGGTCCGTGG AGGCTTCCCT TTATTGGAAG CCTCCATCAC TTGAAGGGAA
181 AACTTCCACA CCATAATCTT AGAGATCTAG CGCGAAAATA TGGACCTCTC ATGTACTTAC
241 AACTCGGAGA AATTCCTGTA GTTGTAATAT CTCGCCACG GTAGCAAAA GCTGTACTAA
301 AAACCTCATG TCTCGCTTTT GCAACTAGAC CACGATTCAT GTCCTCAGAC ATTGTGTTTT
361 ACAAAGCAG GGACATCTCT TTGCCCCAT TTGGTGATTA CTGGAGACAG ATGCGTAAAA
421 TATTGACTCA GGAATCCTG AGCAACAAGA TGCTCAAGTC ATATAGCTTA ATCCGAAAGG
481 ATGAGCTCTC GAAGCTCCTC TCATCGATTG GTTTGGAAC AGGTTCCTGCA GTGAACATAA
541 ATGAAAAGCT TCTCTGTTT ACGAGCTGCA TGACCTGTAG ATTAGCCTTT GGAAAAATAT
601 GCAATGATCG GGATGAGTTG ATCATGCTAA TTAGGGAGAT ATTAACATTA TCAGGAGGAT
661 TTGATGTGGG TGATTGTGTC CCTTCCTGGA AATTACTTCA TAATATGAGC AACATGAAAG
721 CTAGGTTGAC GAATGTACAC CACAAGTATG ATTTAGTTAT GGAGAACATC ATCAATGAGC
781 ACCAAGAGAA TCATGCAGCA GGGATAAAGG GTAACAACGA GTTTGGTGGC GAAGATATGA
841 TCGATGCTCT ACTGAGGGCT AAGGAGAATA ATGAGCTTCA ATTTCTATC GAAAATGACA
901 ACATGAAAGC AGTAATCTTG GACTTGTTTA TTGCTGGAAC TGAAACTTCA TATACTGCAA
961 TTATATGGGC ACTATCAGAA TTGATGAAGC ACCCAAGTGT GATGGCCAAG GCACAAGCTG
1021 AAGTGAGAAA AGTCTTCAAA GAAAATGAAA ATTTGACGCA AAATGATCTT GACAAGTTGC
1081 CATACCTAAA ATCAGTGATT AAAGAAACAC TAAGGATGCA CCCTCCAGTT CCTTTGTTAG
1141 GGCCTAGAGA ATGCAGGGAC CAAACAGAGA TCGATGGCTA CACTGTACCT ATTAAGCTA
1201 GAGTTATGGT TAATGCTTGG GCGATAGGAA GAGATCCTGA AAGTTGGGAA GATCCTGAAA
1261 GTTTCAAACC GGAGCGATTT GAAAATACTT CTGTTGATCT TACAGGAAAT CACTATCAGT
1321 TCATTCCTTT CGGTTTCAAGG AGAAGAATGT GTCCAGGAAT GTCGTTTGGT TTAGTTAACA
1381 CAGGGCATCC TTTAGCCCAG TTGCTCTATT GCTTTGACTG GAAACTCCCT GACAAGGTTA
1441 ATGCAAATGA TTTTCGCACT ACTGAAACAA GTAGAGTTT TGCAGCAAGC AAAGATGACC
1501 TCTACTTGAT TCCCACAAAT CACAGGGAGC AAGAATAGCT TAATTTAATG GAGTTCCTTG
1561 AAGAATTAAA GAAGAAGGCG TATATAGGTG AGATTTTTTG TATGGTTGCA AGGTTTTTAG
1621 TTCATACAAT AAGACAATAC ATTATATTCC AGTATTGTGT ATCATGTATA ATAAGGTTCC
1681 TTTTGTTTAA AAAA

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SEQ. ID. NO. 296

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1 MELQSSPFNL ISLFLFFSFL FILVKKWNAK IPKLPPGPWR LPFIGSLHLH KGKLPHHNLR
61 DLARKYGPLM YLQLGEIPVV VISSPRVAKA VLKTHDLAFA TRPRFMSSDI VFYKSRDISF
121 APFGDYWRQM RKILTQELLS NKMLKSYSLI RKDELSKLLS SIRLETGSAV NINEKLLWFT
181 SCMTCRLAFG KICNDRDELI MLIREILTLG GGFVDVGLFP SWKLLHNMNSN MKARLNTVHH
241 KYDLVMENII NEHQENHAAG IKGNNEFGGE DMIDALLRAK ENNELQFPPIE NDNMKAVILD
301 LFIAGTETSY TAIWALSEL MKHPSVMAKA QAEVRKVFEK NENFDENDLD KLPYLKSVIK
361 ETLRMHPPVP LLGPRECRDQ TEIDGYTVPI KARVMVNAWA IGRDPESWED PESFKPERFE
421 NTSVDLTGNH YQFIPFGSGR RMCPGMSFGL VNTGHPLAQL LYCFDWKLPD KVNANDFRTT
481 ETSRVFAASK DDLYLIPTNH REQE

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FIG. 149

NAME D284-AH5
 ORGANISM NICOTIANA TABACUM
 SEQ. ID. NO. 297

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1 CAATCAGTGG ATGCGGGGAGT AATATATAAT ATGCAAGTTG TAGAAAGAGA AAAAAAAT
61 CAAGTAGCTA TTCTATAC TG GGCACAAAAT AGTGAGTGAA AATGGAGACT GTTCAAATCA
121 TAATAACAGC ATCTTGTGCT GCCATAATAA TTACTCTAGT GGTGTGTATT TGGAGAGTAC
181 TGAATTGGGT TTGGTTCAGA CCAAAGAAGC TGGAAAAACT ATTGAGGAAA CAAGGTCTCA
241 AAGGCAATC CTACAAGATT TTGTATGGGG ATATGAAGGA GCTTTCTGGT ATGATTAAGG
301 AAGCTAATTC CAAACCCATG AATCTTTCTG ATGATATTGC ACCAAGATTG GTGCCCTTCT
361 TTCTTGACAC CATCAAGAAA TATGGTAAAA AATCCTTTGT ATGGTTAGGT CCGAAACCAC
421 TGGTCTTAT CATGGACCCT GAGCTTATAA AGGAAATATT TTCCAAATAC TATCTGTATC
481 AAAGACCTCA TGGAAATCCA GTTACCAAGC TATTAGTACA AGGACTAGTA AGCCTAGAGG
541 AAGACAAATG GGCCAAACAT AGAAAAATCA TCAATCCAGC TTTCCATCTA GAGAAGCTAA
601 AGCATATGCT TCCAGCTTTT TGCTTGAGCT GCACTGAGAT GCTGTGCAAA TGGGAAGATA
661 TTGTTTCAAT TAAGGGCTCA CATGAGATAG ATGTATGGCC TCACCTTGAA CAATTAAGTA
721 GCGATGTGAT CTCTCGGACA GCTTTTGGCA GTAACTTTGA AGAAGTAAA AGGATATTG
781 AACTTCAGAA GGAACAAGCT CAGTATTTTG TAGAAGCTAT ACGCTCGGTT TATATACCAG
841 GCTGGAGGTT TTTGCCAACA AAGAGGAACA GAAGAATGAA GGAAGTTGAA AAGGATGTTT
901 GGGCCTCGAT AAGAGGCATT ATTGATAAAA GAGTGAAGGC AATGAAAGCA GGAGAGGCGA
961 GTAATGAGGA TCTACTTGGT ATATTGTTGG AATCTAATTT TACAGAAGCT GAACAGCATA
1021 GACACAAGGA TTCTGCGATG AGCATTGAAG AAGTCATTCA AGAATGCAAG TTATTCTATG
1081 TTGCTGGCCA AGAACTACA TCAGTGTGTC TTGTGTGGAC TCTAATATTG TTGAGTAGGC
1141 ATCAAGATTG CGAGAGCCGA GCCAGAGAAG AGGTGTTTCA AGTCTTTGGT AATCAGAAAC
1201 CAGATTTTGA CCGATTGAAT CGTCTAAAAG TTGTGACAAT GATCTTGATG GAGTCTTTAA
1261 GGCTATACTC CCCAGTAGTG TCACTAATCC GGC GGCCCTAA TGAGGATGCT ATATTAGGAA
1321 ATGTATCTCT GCCAGAAGGT GTGCTACTCT CATTACCAGT GATCTTATTA CACCACGATG
1381 AAGAGATATG GGGTAAAGAT GCAAAGAAGT TCAATCCAGA AAGATTAGA GATGGAGTCT
1441 CAAGTGCAAC AAAGGTCAC GTCACTTTT TTCCATTAC TTGGGGTCCC AGAATATGCA
1501 TCGGACAAAA TTTTGCCATG TTAGAAGCAA AGACTGCTTT GGCTATGATC CTACAACGCT
1561 TCTCATTGCA ACTGTCTCCA TCTTATGCAC ATGCTCCTCA GTCCATATTA ACTATGCAAC
1621 CCCAATATGG TGCTCCACTA ATTCTGCACA AAATATAGTT TGTTACTTTA AGCAGTGTCT
1681 TGTTATATGT CAGAGAGTCC AAAATGTTTA ATTAAGGCTT GTAGAAGTGC CAAATGGAAC
1741 TTCATTTGCA TTCGTGGGTT GTAGATTGTT GTAATTGGAC AAGTATACTG TTTATTTTATG
1801 AGTTTAAAGA AAAAAA
```

SEQ. ID. NO. 298

```

1 METVQIIITA SCAAIITLV VCIWRVLNVW WFRPKKLEKL LRKQGLKGNs YKILYGMKE
61 LSGMIKEANS KPMNLSDDIA PRLVFFFLDT IKKYGKKSfV WLGPkPLVLI MDPELIKEIF
121 SKYYLYQKPH GNPVTKLLVQ GLVSLEEDKW AKHRKIINPA FHLEKLKHL PAFCLSCTEM
181 LCKWEDIVSI KGSHEIDVWP HLEQLSSDVI SRTAFGSNFE EGKRIFELQK EQAQYFVEAI
241 RSVYIPGWRF LPTKRNRMRK EVEKDVRASI RGIIDKRvKA MKAGEASNED LLGILLESNF
301 TEAEQHRHKD SAMSIEEVIQ ECKLFYVAGQ ETTSVLLVWT LILLSRHQDW QSRAREEVFQ
361 VFGNQKPDFD GLNRLKVVMT ILYESLRLYS PVVSLIRPN EDAILGNVSL PEGVLLSLPV
421 ILLHHDEEIW GKDAKFNP RFRDGVSSAT KGQVTFPPFT WGPRIICIQN FAMLEAKTAL
481 AMILQRFSFE LSPSYAHAPQ SILTMQPOHG APLILHKI
```

Figure 150: Amino Acid Identity of Group Members

Group 1

AQLAINLVTSMLGHLHHFTWAPAGVNPEDIDLEESPGTVTYMKNPIQAIPTPRLPAHLYGRVPVDM	SEQ ID No.:2 D58-BG7
	(98.5)
AQLAINLVTSMLGHLHHFTWAPPGVNPENIDLEESPGTVTYMKNPIQAIPTPRLPAHLYGRVPVDM	SEQ ID No.:4 D58-AB1

Group 2

QLAINLVTSMLGHLFIILHGLRPRGLTRRILTWRRALEQ	SEQ ID No.:8 D58-BE4
---	----------------------

Group 3

EGLAVRMVALSLGCIIQCFDWQRIGEEELVDMTEGTGLTLPKAQPLVAKCSPRPKMANLLSQI	SEQ ID No.:10 D56-AH7
	(93.5)
EGLAIRMVALSLGCIIQCFDWQRLGEGLVDKTEGTGLTLPKAQPLVAKCSPRPIMANLLSQI	SEQ ID No.:12 D13a-5

Group 4

IGFATLVTHLTFGRLLQGFDfsKPSNTPIDMTEGVGVTLPKVNQVEVLITPRLPSKLYLF	SEQ ID No.:14 D56-AG10
	(93.3)
INFATLVTHLTFGRLLQGFDfsTPSNTPIDMTEGVGVTLPKVNQVEVLISPRLPSKLYVF	SEQ ID No.:18 D34-62

Group 5

IILALPILGITLGRIVQNFELLPPPGQSKLDTTEKGGQFSLHILKHSTIVLKPRSF	SEQ ID No.:20 D56-AA7
	(98.2)
IILALPILGITLGRIVQNFELLPPPGQSKLDTTEKGGQFSLHILKHSTIVMKPRSF	SEQ ID No.:144 D185-BD3
	(96.4)
IILALPILGITLGRIVQNFELLPPPGQSKLDTTEKGGQFSLHILKHSTIVLKPRSC	SEQ ID No.:22 D56-AE1

Group 6

IALGVASMELALSNLLYAFDWELPFGMKKEDIDTNARPGITMHKKNELYLIPKNYL	SEQ ID No.:24 D35-BB7
	(92.8)
IALGVASMELALSNLLYAFDWELPYGVKKENIDTNVRPGITMHKKNELCLIPRNYL	SEQ ID No.:26 D177-BA7
	(96.4)
IALGVASMELALSNLLYAFDWELPYGVKKEDIDTNVRPGIAMHKKNELCLVPKNYL	SEQ ID No.:28 D56A-AB6
	(94.6)
IALGVASMELALSNLLYAFDWELPYGVKKEDIDTNVRPGIAMHKKNELCLVPKKLFINYIGTWISC	SEQ ID No.:30 D144-AE2

Group 7

ISFGLANAYLPLAQLLYHFDWELPTGIKPSDLDLTELVGVTAAARKSDLYLVATPYQPPQN	SEQ ID No.:32 D56-AG11
	(93.3)
ISFGLANAYLPLAQLLYHFDWKLPAgiePSDLDLTELVGVTAAARKSDLYLVATPYQPPQK	SEQ ID No.:34 D179-AA1

Group 8

MLFGLANVGQPLAQLLYHFDWKLPNGQSHENFDMTESPGISATRKDDLVLIATPYDSY	SEQ ID No.:36 D56-AC7
	(91.2)
MLFGLANVGQPLAQLLYHFDWKLPNGQTHQNFDMTESPGISATRKDDLILIAATPAHS	SEQ ID No.:38 D144-AD1

Group 9

LLFGLVNVGHPLAQLLYHFDWKTLPGISSDSFDMTETDGVTAGRKDDLCLIATPFGLN

SEQ ID No.:40 D144-AB5

Group 10

MSFGLVNTGHPLAQLLYFFDWKFPFKVNAAADFHTTETSRVFAASKDDLYLIPTNHMEQE

SEQ ID No.:42 D181-AB5

| | | |
MSFGLVNTGHPLAQLLYCFDWKLPDKVNANDFRTTETSRVFAASKDDLYLIPTNHREQE

(89.8)

SEQ ID No.:44 D73-Ac9

Group 11

MQFGLALVTLPLAHLHNFWDWKLPEGINARDLDMTEANGISARREKDLYLIATPYVSPLD

SEQ ID No.:46 D56-AC12

Group 12

MTYALQVEHLTMAHLIQGFNYRTPTDEPLDMKEGAGITIRKVNVPKVIITPRLAPELY

SEQ ID No.:48 D58-AB9

| | | |
MTYALQVEHLTMAHLIQGFNYKTPNDEALDMKEGAGITIRKVNVPVELIIAPRLAPELY

(89.6)

SEQ ID No.:50 D56-AG9

| |
MTYALQVEHLTMAHLIQGFNYKTPNDEALDMKEGAGITIRKVNVPVELIITPRLAPELY

(98.2)

SEQ ID No.:52 D56-AG6

| |
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVNVPVELIIAPRLAPELY

(94.8)

SEQ ID No.:54 D35-BG11

|
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVNVPVELIIAP-LAPELY

(98.3)

SEQ ID No.:56 D35-42

|
MTYALQVEHLTMAHLIQGFNYRTPNDEPLDMKEGAGITIRKVNPAELIIAPRLAPELY

(98.3)

SEQ ID No.:58 D35-BA3

| | | |
MTYALQVEHLTIAHLIQGFNYKTPNDEPLDMKEGAGITIRKVNPEVTTTARLAPELY

(84.5)

SEQ ID No.:60 D34-57

|
MTYALQVEHLTIAHLIQGFNYKTPNDEPLDMKEGAGITIRKVNPEVTTITARLAPELY

(98.3)

SEQ ID No.:62 D34-52

Group 13

YSLGLKVIRVTLANMLHGFNWKLPEGMKPEDISVEEHYGLTTHPKFPVPVILESRSSDLYSPIT

SEQ ID No.:66 D56-AD10

Group 14

YSLGIRIIRATLANLLHGFNWRLPNGMSPEDISMEEIYGLITHPKVALDVMMEPRLPNHLYK

SEQ ID No.:68 D56-AA11

Group 15

INFSIPLVELALANLLFHYNWSLPEGMLAKDVDMEALGITMHKKSPLCLVASHYTC

SEQ ID No.:70 D177-BD5

| |
INFSIPLVELALANLLFHYNWSLPEGMLPKDVDMEALGITMHKKSPLCLVASHYNLL

(94.7)

SEQ ID No.:84 D177-BD7

Group 16

MQGLYALEMAVAHLLLCFTWELPDGMKPSELKMDDIFGLTAPRANRLVAVPSRLLCPLY

SEQ ID No.:74 D58-BC5

| |
MQGLYALEMAVAHLLHCFTWELPDGMKPSELKMDDIFGLTAPRANRLVAVPTPRLLCPLY

(96.7)

SEQ ID No.:76 D58-AD12

|
MQGLYALEMAVAHLLHCFTWELPDGMKPSELKMDDIFGLTAPKANRLVAVPTPRLLCPLY

(98.4)

SEQ ID No.:72 D56A-AG10

Group 17

MLWSASIVRVSYLTCIYRFQVYAGSVFRA

SEQ ID No.:78 D56-AC11

MLWSASIVRVSYLTCIYRFQVYAGSVSRVA

(96.7)
SEQ ID No.:88 D56-AD6F

Group 18

LNFAMLEAKMALALILQHYAFELSPSYAHAPHTIITLQPOHGAPLILRKL

SEQ ID No.:90 D73A-AD6

Group 19

QNFAILEAKMAIAMILQRFSELSPSYTHSPYTVVTLKPKYGAPLIMHRL

SEQ ID No.:96 D70A-AB5
(72.0)

QNFAMLEAKMALSMILQRFSELSPSYAHAPQSILTVQPQYGAPLIHFKL

SEQ ID No.:100 D70A-AB8

QNFAMLEAKMALSMILQRFSELSPSYAHAPQSILTVQPQYGAPLIHFKL

(82.0)

INFAMTEAKMAMAMILQRFSELSPSYTHAPQSIVITMQPQYGAPLILHKL

SEQ ID No.:102 D70A-BH2

INFAMTEAKMAMAMILQRFSELSPSYTHAPQSIVITMQPQYGAPLILHKL

(98.0)

INFAMAEAKMAMAMILQRFSELSPSYTHAPQSIVITMQPQYGAPLILHKL

SEQ ID No.:104 D70A-AA4

QNFAMMEAKMAVAMILHKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

(70.0)

QNFAMMEAKMAVAMILHKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

SEQ ID No.:108 D70A-BA9

QNFAMMEAKMAVAMILHKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

(98.0)

QNFAMMEAKMAVAMILQKFSFELSPSYTHAPFAIVTIHPQYGAPLLMRRL

SEQ ID No.:106 D70A-BA1

Group 20

QNFAMLEAKMAMAMILKTYAFELSPSYAHAPHPLLLQPQYGAQLILYKL

SEQ ID No.:110 D70A-BD4

Group 21

YSMGLKAIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

SEQ ID No.:112 D181-AC5
(96.8)

YSLGLKEIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

SEQ ID No.:114 D144-AH1

YSLGLKEIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

(96.8)

HSLGLKVIQASLANLLHGFNWSLPDNMTPEDLNMDEIFGLSTPKKFPLATVIEPRLSPKLYSV

SEQ ID No.:116 D34-65

Group 22

LCFPCLISSYILALNVNLYHNFLQISPSISY

SEQ ID No.:118 D35-BG2

Group 23

SGLAQCVCVGLALATLVQCFEWKRVSEEVVDLTEGKGLTMPKPEPLMARCEARDIFHKVLSEIS

SEQ ID No.:120 D73A-AH7

Group 24

LGLATVHVNLMMLARMIQEFESAYPENRKVDLLRNWNLLW

SEQ ID No.:136 D185-BG2
(77.5)

LGLATVHVNLMMLARMIQEFESAYPENRKVDFTTEKLEFTVVMKNPLRAKVKPRMQVV

SEQ ID No.:122 D58-AA1

LGLATVHVNLMMLARMIQEFESAYPENRKVDFTTEKLEFTVVMKNPLRAKVKPRMQVV

(98.2)

LGLATVHVNLMMLARTIQEFESAYPENRKVDFTTEKLEFTVVMKNPLRAKVKPRMQVV

SEQ ID No.:134 D185-BC1

YALAMHLEYFVANLVWHFRWEAVEGDDVDLSEKLEFTVVMKNPLRARCPRVNSI

Group 26

QQVGLLRTTIFIASLLSEYKLKPRSHQKQVELTDLNPASWLHSIKGELLVDAIPRKKA

Group 27

ITFAKFVNELALARLMFHDFSLPKG VKHEDLDVEEAAGITVRRKFPLLAVATPCS

SEQ ID No.:128 D177-BF7

ITFAKFVNELALARLMFHDFSLPKGVKHADLDVEEAAGITVRRKFPLLAVATPCS

(98.2)
SEQ ID No.:140 D185-BD2

QRYAINHLMFLIALFTALIDFKRHKTGCGDDIAYIPTIAPKDDCKVFLSORCTRFPSEFS

SEQ ID No.:130 D73A-AG3

Group 29

MSFGLANLYLPLAQLLYHFDWKLPTGIKPRDLDLTELSGITIARKGDLYLNATPYOPSRE

SEO ID No.:132 D70A-AA12

ISFGLANVYLPLAQLLYHFDWKLP¹GTGIN²SSDL³DM⁴TESS⁵GVT⁶CA⁷RK⁸SD⁹LY¹⁰L¹¹TAT¹²PY¹³OL¹⁴SOE¹⁵

SEQ ID No.: 86 176-BF2 (80.0)

Group 30

QNFAMLEAKTTLAMILQRFSFELSPSYAHAPQSIITCNPSMVLHLFCIKYSLLLVSSVSFYVKHESKMLRLVELONGNAFALVHCRLL

SEQ ID No.:146 D176-BC3

Group 31

ADMGLRAVSLALGALIQCFDWQIEEAESLEESYNSRMTMKNKPLKVVCTPREDLGOLLSOL

SEQ ID No.:148 D176-BB3

Group 32

MNYSLQVEHLSIAHMIQGFSFATTTNEPLDMKQGVGLTLPKKTDEVLITPRLPPTLYQY

SEO ID No.: 6 D186-AH4

The percentage identity between most related pairs is noted in (0.0%). Each group had at least 70% identity to another group member. Group 19 contained the lowest percentage identity at 70.0%.

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

ALIGNMENT OF GROUP 1

```

D58-BG7      GCACAACCTTGCTATCAACTTGGTCACATCTATGTTGGGTCATTGTTGCATCATTTTACA SEQ ID No 1
D58-AB1      GCACAACCTTGCTATCAACTTGGTCACATCTATGTTGGGTCATTGTTGCATCATTTTACG SEQ ID No 3
D58-BE4      GCACAACCTTGCTATCAACTTGGTCACATCTATGTTGGGTCATTGTT-CATCATTTTACA SEQ ID No 7
*****

D58-BG7      TGGGCTCCGGCCCGGGGGTTAACCCGGAGGATATTGACTTGGAGGAGAGCCCTGGAACA
D58-AB1      TGGGCTCCGGCCCGGGGGTTAACCCGGAGAAATTGACTTGGAGGAGAGCCCTGGAACA
D58-BE4      TGGGCTCCGGCCCGGGGGTTAACCCGGAGGATATTGACTTGGAGGAGAGCCCTGGAACA
*****

D58-BG7      GTAACCTTACATAAAAATCCAATACAAGCTATTCCAACCTCCAAGATTGCCTGCACACTTG
D58-AB1      GTAACCTTACATAAAAATCCAATACAAGCTATTCCCTACTCCAAGATTGCCTGCACACTTG|
D58-BE4      GTAACCTTACATGA-|||||
*****

D58-BG7      TATGGACGTGTGCCAGTGGATATGTAA
D58-AB1      TATGGACGTGTGCCAGTGGATATGTAA
D58-BE4      -----

```

PERCENT IDENTITY OF GROUP 1

	D58-BG7	D58-BE4	D58-AB1	
D58-BG7	***	96.2	98.1	SEQ ID No 1
D58-BE4		***	94.0	SEQ ID No 7
D58-AB1			***	SEQ ID No 3

ALIGNMENT OF GROUP 2

```

D56-AH7      GAAGGATTGGCTGTTCGAATGGTTGCCTTGTCATTGGGATGTATTATTCATGTTTGTAT SEQ ID No 9
D13a-5      GAAGGATTGGCTATTTCGAATGGTTGCATTGTTCATTGGGATGTATTATTCATGCTTTGTAT SEQ ID No 11
*****

D56-AH7      TGGCAACGAATCGGCGAAGAATTGGTTGATATGACTGAAGGAACCTGGACTTACTTTGCCT
D13a-5      TGGCAACGACTTGGGGAAGGATTGGTTGATAGACTGAAGGAACCTGGACTTACTTTGCCT
*****

D56-AH7      AAAGCTCAACCTTTAGTGGCCAAAGTGTAGCCACGACCTAAATGGCTAATCTTCTCTCT
D13a-5      AAAGCTCAACCTTTAGTGGCCAAAGTGTAGCCACGACCTATAATGGCTAATCTTCTTCT
*****

D56-AH7      CAGATTGA
D13a-5      CAGATTGA
*****

```

PERCENT IDENTITY OF GROUP 2

	D56-AH7	D13a-5	
D56-AH7	***	93.7	SEQ ID No 9
D13a-5		***	SEQ ID No 11

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

ALIGNMENT OF GROUP 3

```

D56-AG10      ATAGGTTTTGCGACTTTAGTGACACATCTGACTTTTGGTCGCTTGCTTCAAGGTTTGTAT  SEQ ID No 13
                |
D35-33        ATAGGCTTTGCGACTTTAGTGACACATCTGACTTTTGGTCGCTTGCTTCAAGGTTTGTAT  SEQ ID No 15
                |||
D34-62        ATAAATTTTGGCGACTTTAGTGACACATCTGACTTTTGGTCGCTTGCTTCAAGGTTTGTAT  SEQ ID No 17
                *** *****

D56-AG10      TTTAGTAAGCCATCAACACGCCAATTGACATGACAGAAGGCGTAGGCGTTACTTTGCCT
D35-33        TTTAGTAAGCCATCAACACGCCAATTGACATGACAGAAGGCGTAGGCGTTACTTTGCCT
                |
D34-62        TTTAGTACGCCATCAACACGCCAATAGACATGACAGAAGGCGTAGGCGTTACTTTGCCT
                *****

D56-AG10      AAGGTTAATCAAGTTGAAGTTCTAATTACCCCTCGTTTACCTTCTAAGCTTTATTTATTTTGA
D35-33        AAGGTTAATCAAGTTGAAGTTCTAATTACCCCTCGTTTACCTTCTAAGCTTTATTTAT-----
                |
D34-62        AAGGTTAATCAAGTTGAAGTTCTAATTACCCCTCGTTTACCTTCTAAGCTTTATGTATTTCTGA
                *****

```

PERCENT IDENTITY OF GROUP 3

	D56-AG10	D35-33	D34-62	
D56-AG10	***	98.9	95.1	SEQ ID No 13
D35-33		***	94.4	SEQ ID No 15
D34-62			***	SEQ ID No 17

ALIGNMENT OF GROUP 4

```

D56-AA7        ATTATACTTGCAATTGCCAATTCTTGGCATCACCTTGGGACGTTTGGTTCAGAACTTTGAG
                |
D56-AE1        ATTATACTTGCAATTGCCAATTCTTGGCATTACTTTGGGACGTTTGGTTCAGAACTTTGAG
                |
D185-BD3       ATTATCCTTGCACTGCCAATTCTTGGCATTACCTTGGGACGCTTGGTTCAGAACTTTGAG
                *****

D56-AA7        CTGTTGCCTCCTCCAGGCCAGTCGAAGCTCGACACCACAGAGAAAGGTGGACAGTTCAGT
D56-AE1        CTGTTGCCTCCTCCAGGCCAGTCGAAGCTCGACACCACAGAGAAAGGTGGACAGTTCAGT
                |
D185-BD3       TTGTTGCCTCCTCCAGGACAGTCGAAAGCTTGACACACAGAGAAAGCGGGCAATTTCAGT
                *****

D56-AA7        CTCCACATTTTGAAGCATTCACCATTGTGTTGAAACCAAGGTCTTTCTGA
                |
D56-AE1        CTCCATATTTTGAAGCATTCACCATTGTGTTGAAACCAAGGTCTTGCTGA
                |
D185-BD3       CTGCACATTTTGAAGCATTCACCATTGTGATGAAACCAAGATCTTTTAA
                ** *

```

PERCENT IDENTITY OF GROUP 4

	D56AA7	D56-AE1	D185-BD3	
D56AA7	***	98.2	87.7	SEQ ID No 19
D56-AE1		***	87.1	SEQ ID No 21
D185-BD3			***	SEQ ID No 143

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

ALIGNMENT OF GROUP 5

D56A-AB6	ATTGCAC TTGGGTTGCATCCATGGAAC TTGCTTTGTCAAATCTCTTTATGCATTTGAT	SEQ ID No 27			
D35-BB7	ATTGCAC TTGGGTTGCATCAATGGAAC TTGCATTGTCAAATCTCTTTATGCATTTGAT	SEQ ID No 23			
D177-BA7	ATTGCAC TTGGGTTGCATCCATGGAAC TTGCTTTGTCAAATCTCTTTATGCATTTGAT	SEQ ID No 25			
D144-AE2	ATTGCAC TTGGGTTGCATCCATGGAAC TTGCTTTGTCAAATCTCTTTATGCATTTGAT	SEQ ID No 29			

D56A-AB6	TGGGAGTTGCCTTATGGAGTGAAGAAAGAACATCGACACAAACGTTAGGCCTGGAATT				
D35-BB7	TGGGAGTTACCTTTTGAATGAAGAAAGAACATTGACACAAACGCCAGGCCTGGAATT				
D177-BA7	TGGGAGTTACCTTACGGAGTGAAGAAAGAACATTGACACAAATGTCAGGCCTGGAATT				
D144-AE2	TGGGAGTTGCCTTATGGAGTGAAGAAAGAACATCGACACAAACGTTAGGCCTGGAATT				

D56A-AB6	GCCATGCACAAGAAAACGAAC TTGCTTGTCCCAAAAAA-TTATTATAA----				
D35-BB7	ACCATGCATAAGAAAACGAAC TTATCTTATCCCTAAAAA-TTATCTATAG----				
D177-BA7	ACCATGCATAAGAAAACGAAC TTGCTTATCCCTAGAAA-TTATCTATAG----				
D144-AE2	GCCATGCACAAGAAAACGAAC TTGCTTGTCCCAAAAAATTATTATAAATTAT				

D56A-AB6	-----				
D35-BB7	-----				
D177-BA7	-----				
D144-AE2					
	ATTGGGACGTGGATCTCATGCTAG				
PERCENT IDENTITY OF GROUP 5					
	D56A-AB6	D35-BB7	D144-AE2	D177-BA7	
D56A-AB6	***	90.6	97.1	91.8	SEQ ID No 27
D35-BB7		***	97.1	93.0	SEQ ID No 23
D144-AE2			***	88.9	SEQ ID No 29
D177-BA7				***	SEQ ID No 25

ALIGNMENT OF GROUP 6

D56-AG11	ATTTCGTTTGGTTAGCTAATGCTTATTTGCCATTGGCTCAATTACTTTATCATTTGAT	
D179-AA1	ATTTCGTTTGGCTTAGCTAATGCTTATTTGCCATTGGCTCAATTACTATATCATTTCGAT	

D56-AG11	TGGGAAC TCCCACTGGAATCAAACCAAGCGACTTGGACTTGACTGAGTTGGTTGGAGTA	
D179-AA1	TGGGAAC TCCCTGCTGGAATCGAACCAAGCGACTTGGACTTGACTGAGTTGGTTGGAGTA	

D56-AG11	ACTGCCGCTAGAAAAAGTGACCTTTACTTGGTTGCGACTCCTTATCAACCTCCTCAAAACTGA	
D179-AA1	ACTGCCGCTAGAAAAAGTGACCTTTACTTGGTTGCGACTCCTTATCAACCTCCTCAAAAGTGA	

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

PERCENT IDENTITY OF GROUP 6

	SEQ ID No 31	SEQ ID No 33	
	D56-AG11	D179-AA1	
D56-AG11	***	95.6	SEQ ID No 31
D179-AA1		***	SEQ ID No 33

ALIGNMENT OF GROUP 7

D56-AC7	ATGCTATTGGTTAGCTAATGTTGGACAACCTTTAGCTCAGTTACTTTATCACTTCGAT	SEQ ID No 35
D144-AD1	ATGCTATTGGTTAGCTAATGTTGGACAACCTTTAGCTCAGTTACTTTATCACTTCGAT	SEQ ID No 37

D56-AC7	TGGAAACTCCCTAATGGACAAAGTCATGAGAATTCGACATGACTGAGTCACCTGGAATT	
D144-AD1	TGGAAACTCCCTAATGGACAAACTCACCAAAATTCGACATGACTGAGTCACCTGGAATT	

D56-AC7	TCTGCTACAAGAAAGGATGATCTTGTGTTTGGATTGCCACTCCTTATGATTCTTATTAA	
D144-AD1	TCTGCTACAAGAAAGGATGATCTTATTTGATTGCCACTCCTGCTCATTCTTGA	

Deleted:

PERCENT IDENTITY OF GROUP 7

	D144-AD1	D56-AC7	
	***	94.3	
D144-AD1		***	SEQ ID No 37
D56-AC7			SEQ ID No 35

Deleted: 1

ALIGNMENT OF GROUP 9

D181-AB5	ATGTCGTTTGGTTAGTTAACTGGGCATCCTTTAGCTCAGTTGCTCTATTCTTTGAC	SEQ ID No 41
D73-AC9	ATGTCGTTTGGTTAGTTAACTGGGCATCCTTTAGCTCAGTTGCTCTATTCTTTGAC	SEQ ID No 43

D181-AB5	TGGAAATTCCTCATAAGGTTAATGCAGCTGATTTTCACACTACTGAAACAAGTAGAGTT	
D73-AC9	TGGAAATTCCTCATAAGGTTAATGCAGCTGATTTTCACACTACTGAAACAAGTAGAGTT	

D181-AB5	TTTGCAGCAAGCAAGATGACCTCTACTTGATTCCACAAATCACATGGAGCAAGAGTAG	
D73-AC9	TTTGCAGCAAGCAAGATGACCTCTACTTGATTCCACAAATCACAGGGAGCAAGAGTAG	

PERCENT IDENTITY OF GROUP 9

	D181-AB5	D73-AC9	
	***	92.8	
D181-AB5		***	SEQ ID No 41
D73-AC9			SEQ ID No 43

Deleted: 1

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

ALIGNMENT OF GROUP 11

D58-AB9	ATGACTTATGCATTGCAAGTGGAAACACCTAACAAATGGCACATTTGATCCAGGGTTTCAAT	SEQ ID No 47
D56-AG9	ATGACTTATGCATTGCAAGTGGAAACACCTAACAAATGGCACATTTAATCCAGGGTTTCAAT	SEQ ID No 49
D35-BG11	ATGACTTATGCATTGCAAGTGGAAACACTTAACAATGGCACATTTGATCCAAGGGTTTCAAT	SEQ ID No 53
D34-25	ATGACTTATGCATTACAAGTGGAAACACCTAACAAATAGCACATTTGATCCAGGGTTTCAAT	SEQ ID No 63
D35-BA3	ATGACTTATGCATTGCAAGTGGAAACACTTAACAATGGCACATTTGATCCAAGGGTTTCAAT	SEQ ID No 57
D34-52	ATGACTTATGCATTACAAGTGGAAACACCTAACAAATAGCACATTTGATCCAGGGTTTCAAT	SEQ ID No 61
D56-AG6	ATGACTTATGCATTGCAAGTGGAAACACCTAACAAATGGCACATTTAATCCAGGGTTTCAAT	SEQ ID No 51
D35-42	ATGACTTATGCATTGCAAGTGGAAACACTTAACAATGGCACATTTGATCCAAGGGTTTCAAT	SEQ ID No 55
D34-57	ATGACTTATGCATTACAAGTGGAAACACCTAACAAATAGCACATTTGATCCAGGGTTTCAAT	SEQ ID No 59

D58-AB9	TACAGAACTCCAATGATGAGCCCTTGGATATGAAAGAAGGTGCAGGCATAACTATACGT	
D56-AG9	TACAAAACCTCCAAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGCATAACTATACGT	
D35-BG11	TACAGAACTCCAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGCATAACTATACGT	
D34-25	TACAAAACCTCCAAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGATTAACATACGT	
D35-BA3	TACAGAACTCCAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGCATAACTATACGT	
D34-52	TACAAAACCTCCAAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGATTAACATACGT	
D56-AG6	TACAAAACCTCCAAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGCATAACAATACGT	
D35-42	TACAGAACTCCAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGCATAACTATACGT	
D34-57	TACAAAACCTCCAAATGACGAGGCCCTTGGATATGAAGGAAGGTGCAGGATTAACCATACGT	
	**** *****	
D58-AB9	AAGGTAATCCTGTGAAAGTGATAATTACGCCTCGCTTGGCACCTGAGCTTTATTAA	
D56-AG9	AAGGTAATCCTGTGGAAGTGATAATAGCGCCTCGCTGGCACCTGAGCTTTATTAA	
D35-BG11	AAGGTAATCCTGTGGAAGTGATAATAGCGCCTCGCTGGCACCTGAGCTTTATTAA	
D34-25	AAAGTAAATCCTGTAGAAGTGACAATTACGGCTCGCTGGCACCTGAGCTTTATTAA	
D35-BA3	AAGGTAATCCTGCGGAAGTGATAATAGCGCCTCGCTGGCACCTGAGCTTTATTAA	
D34-52	AAAGTAAATCCTGTAGAAGTGACAATTACGGCTCGCTGGCACCTGAGCTTTATTAA	
D56-AG6	AAGGTAATCCTAGTGAATTGATAATAACGCCCTCGCTTGGCACCTGAGCTTTACTAA	
D35-42	AAGGTAATCCTGTGGAAGTGATAATAGCGCCCC--TGGCACCTGAGCTTTATTAA	
D34-57	AAAGTAAATCCTGTAGAAGTGACAACCTACGGCTCGCTGGCACCTGAGCTTTATTAA	
	** *****	

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

PERCENT IDENTITY OF GROUP 11

	D58-AB9		D56-AG6			D35-42		D35-BA3		D34-57		D34-25	
		D56-AG9	D35-BG11							D34-52			
D58-AB9	***	93.8	93.2	94.3	90.8	93.2	90.9	92.0	91.5		SEQ ID No 47		
D56-AG9		***	96.6	97.2	94.2	96.6	91.5	92.6	92.0		SEQ ID No 49		
D56-AG6			***	93.8	90.2	92.6	90.3	90.9	90.3		SEQ ID No 51		
D35-BG11				***	97.1	99.4	90.9	92.0	91.5		SEQ ID No 53		
D35-42					***	96.5	87.3	88.4	87.9		SEQ ID No 55		
D35-BA3						***	90.3	91.5	90.9		SEQ ID No 57		
D34-57							***	98.9	98.3		SEQ ID No 59		
D34-52								***	99.4		SEQ ID No 61		
D34-25									***		SEQ ID No 63		

ALIGNMENT OF GROUP 14

D177-BD7	ATTAATTTTTC AATACCACCTTGTGAGCTTGCACCTTGTCTAATCTATTGTTTCATTATAAT	SEQ ID No 83
D177-BD5	ATTAATTTTTC AATACCACCTTGTGAGCTTGCACCTTGTCTAATCTATTGTTTCATTATAAT	SEQ ID No 69
D177-BD7	TGGTCACTTCTCTGAGGGGATGCTACCTAAGGATGTTGATATGGAAGAAGCTTTGGGGATT	
D177-BD5	TGGTCACTTCTCTGAGGGGATGCTAGCTAAGGATGTTGATATGGAAGAAGCTTTGGGGATT	
D177-BD7	ACCATGCACAAGAAATCTCCCTTTGCTTAGTAGCTTCTCATTATAACTTGTGTGA	
D177-BD5	ACCATGCACAAGAAATCTCCCTTTGCTTAGTAGCTTCTCATTATA-CTTGTGTA--	

PERCENT IDENTITY OF GROUP 14

	D177-BD7	D177-BD5	
D177-BD7	***	96.0	SEQ ID No 83
D177-BD5		***	SEQ ID No 69

ALIGNMENT OF GROUP 15

D56A-AG10	ATGCAACTTGGGCTTTATGCATTGGAAATGGCTGTGGCCCATCTTCTTCATTGTTTACT	SEQ ID No 71
D58-AD12	ATGCAACTTGGGCTTTATGCATTGGAAATGGCTGTGGCCCATCTTCTTCATTGTTTACT	SEQ ID No 75
D58-BC5	ATGCAACTTGGGCTTTATGCATTGAGAAATGGCAGTGGCCCATCTTCTTCTTGGCTTTACT	SEQ ID No 73
D56A-AG10	TGGGAATTGCCAGATGGTATGAAACCAAGTGAGCTTAAATGGATGATATTTTGGACTC	
D58-AD12	TGGGAATTGCCAGATGGTATGAAACCAAGTGAGCTTAAATGGATGATATTTTGGACTC	
D58-BC5	TGGGAATTGCCAGATGGTATGAAACCAAGTGAGCTTAAATGGATGATATTTTGGACTC	
D56A-AG10	ACTGCTCCAAAAGCTAATCGACTCGTGGCTGTGCCTACTCCACGTTTGTGTGTCCTT	
D58-AD12	ACTGCTCCAAAGCTAATCGACTCGTGGCTGTGCCTACTCCACGTTTGTGTGTCCTT	
D58-BC5	ACTGCTCCAAAGCTAATCGACTCGTGGCTGTGCCTAGTCCACGTTTGTGTGTCCTT	

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FIGURE 151: COMPARISON OF SEQUENCE GROUPS

D56A-AG10 TATTAA
D58-AD12 TATTAA
D58-BC5 TATTAA

PERCENT IDENTITY OF GROUP 15

	D56A-AG10	D58-AD12	D58-BC5	
D56A-AG10	***	99.5	95.7	SEQ ID No 71
D58-AD12		***	96.2	SEQ ID No 75
D58-BC5			***	SEQ ID No 73

ALIGNMENT OF GROUP 16

D56-AD6 ATGCTTTGGAGTGGAGTATAGTGC GGTACCTA AACTTGTATTTATAGATTCCAA SEQ ID No 87
D56-AC11 ATGCTTTGGAGTGGAGTATAGTGC GGTACCTA AACTTGTATTTATAGATTCCAA SEQ ID No 77
D35-39 ATGCTTTGGAGTGGAGTATAGTGC GGTACCTA AACTTGTATTTATAGATTCCAA SEQ ID No 79
D58-BH4 ATGCTTTGGAGTGGAGTATAGTGC GGTACCTA AACTTGTATTTATAGATTCCAA SEQ ID No 81

D56-AD6 GTATATGCTGGGTCTGTGTCAGAGTAGCATGA
D56-AC11 GTATATGCTGGGTCTGTGTCAGAGTAGCATGAD35-39
GTATATGCTGGGTCTGTGTCAGAGTAGCATGA
D58-BH4 GTATATGCTGGGTCTGTGTCAGAGTAGCATGA

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1

PERCENT IDENTITY OF GROUP 16

	D56-AC11	D56-AD6	D58-BH4	D35-39	
D56-AC11	***	98.7	98.7	98.7	SEQ ID No 77
D56-AD6		***	98.7	98.7	SEQ ID No 87
D58-BH4			***	98.7	SEQ ID No 81
D35-39				***	SEQ ID No 79

ALIGNMENT OF GROUP 17

D73A-AD6 CTGAATTTTGCAATGTTAGAGGCAAAAATGGCACTTGCATTGATTCTACAACACTATGCT SEQ ID No 89
D70A-BA11 CTGAATTTTGCAATGTTAGAGGCAAAAATGGCACTTGCATTGATTCTACAACACTATGCT SEQ ID No 91

D73A-AD6 TTTGAGCTCTCTCCATCTTATGCACATGCTCCTCATAACAATTATCACTCTGCAACCTCAA
D70A-BA11 TTTGAGCTCTCTCCATCTTATGCACAGCTCCTCATAACAATTATCACTCTGCAACCTCAA

D73A-AD6 CATGGTGCTCCTTTGATTTTGGCGCAAGCTGTAG
D70A-BA11 CATGGTGCTCCTTTGATTTTGGCGCAAGCTGTAG

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FIGURE 151: COMPARISON OF SEQUENCE GROUPS

PERCENT IDENTITY OF GROUP 17

	<u>D73A-AD</u>	<u>D70A-BA11</u>	
D73A-AD6	***	99.3	SEQ ID No 89
D70A-BA11		***	SEQ ID No 91

ALIGNMENT OF GROUP 18

D70A-AB5	CAAAACTTCGCGATTTTGAAGCAAAAATGGCTATAGCTATGATTCTACAACGCTTCTCC	SEQ ID No 95
D70A-AA8	CAAAACTTCGCGATTTTGAAGCAAAAATGGCTATAGCTATGATTCTACAACGCTTCTCC	SEQ ID No 97
D70A-AB5	TTCGAGCTCTCCCATCTTATACACACTCTCCATACACTGTGGTCACTTTGAAACCCAAA	
D70A-AA8	TTCGAGCTCTCTCCCATCTTATACACACTCTCCATACACTGTGGTCACTTTGAAACCCAAA	
D70A-AB5	TATGGTGCTCCCTAATAATGCACAGGCTGTAG	
D70A-AA8	TATGGTGCTCCCTAATAATGCACAGGCTGTAG	

Deleted: 1

PERCENT IDENTITY OF GROUP 18

	<u>D70A-AB5</u>	<u>D70A-AA8</u>	
D70A-AB5	***	99.6	SEQ ID No 95
D70A-AA8		***	SEQ ID No 97

ALIGNMENT OF GROUP 19

D70A-AB8	CAAAATTTTGCATGTAGAAAGCAAGATGGCTCTGTCTATGATCCTGCAACGCTTCTCT	SEQ ID No 99
D70A-BH2	ATAAACTTTGCAATGACAGAGCGAAGATGGCTATGGCTATGATTCTGCAACGCTTCTCC	SEQ ID No 101
D70A-AA4	ATAAACTTTGCAATGGCAGAGCGAAGATGGCTATGGCTATGATTCTGCAACGCTTCTCC	SEQ ID No 103
D70A-AB8	TTTGAAGTGTCTCCGCTTTATGCACATGCCCTCAGTCCATATTAACGGT-CAGCCACAA	
D70A-BH2	TTTGAGCTATCTCCATCTTACACACATGCTCCACAGTCTGTAATAACTATGCAACCCCAA	
D70A-AA4	TTTGAGCTATCTCCATCTTACACACATGCTCCACAGTCTGTAATAACTATGCAACCCCAA	
D70A-AB8	TATGGTGCTCCACTTATTTCCACAAGCTATAA	
D70A-BH2	TATGGTGCTCCTCTTATATTGCACAAATTGTAA	
D70A-AA4	TATGGTGCTCCTCTTATATTGCACAAATTGTAA	

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PERCENT IDENTITY OF GROUP 19

	<u>D70A-AB8</u>	<u>D70A-AA4</u>	<u>D70A-BH2</u>	
D70A-AB8	***	77.8	77.8	SEQ ID No 99
D70A-AA4		***	99.3	SEQ ID No 101
D70A-BH2			***	SEQ ID No 103

ALIGNMENT OF GROUP 20

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

D70A-BA1	CAAACTTTGCAATGATGGAAGCAAAAATGGCAGTAGCTATGATACTACAAAAATTITCC	SEQ ID No 105
D70A-BA9	CAAACTTTGCAATGATGGAAGCAAAAATGGCAGTAGCTATGATACTACATAAAATTITCC *****	SEQ ID No 107
D70A-BA1	TTTGAACATATCCCTCTTATACACATGCTCCATTGCAATTGTGACTATTATCCTCAG	
D70A-BA9	TTTGAACATATCCCTCTTATACACATGCTCCATTGCAATTGTGACTATTATCCTCAG *****	
D70A-BA1	TATGGTGCTCCTCTGCTTATGCGCAGACTTTAA	
D70A-BA9	TATGGTGCTCCTCTGCTTATGCGCAGACTTTAA *****	

PERCENT IDENTITY OF GROUP 20

	<u>D70A-BA1</u>	<u>D70A-BA9</u>	
D70A-BA1	***	99.4	SEQ ID No 105
D70A-BA9		***	SEQ ID No 107

ALIGNMENT OF GROUP 22

D144-AH1	TATAGCTTGGGGCTCAAGGAGATTCAAGCTAGCTTAGCTAATCTTCTACATGGATTTAAC	SEQ ID No 113
D34-65	CATAGCTTGGGGCTCAAGGTGATTCAAGCTAGCTTAGCTAATCTTCTACATGGATTTAAC	SEQ ID No 115
D181-ACS	TATAGCATGGGGCTCAAGGCATTCAAGCTAGCTTAGCTAATCTTCTACATGGATTTAAC *****	SEQ ID No 111
D144-AH1	TGGTCATTGCCTGATAATATGACTCCTGAGGACCTCAACATGGATGAGATTTTGGGCTC	
D34-65	TGGTCATTGCCTGATAATATGACTCCTGAGGACCTCAACATGGATGAGATTTTGGGCTC	
D181-ACS	TGGTCATTGCCTGATAATATGACTCCTGAGGACCTCAACATGGATGAGATTTTGGGCTC *****	
D144-AH1	TCTACACCTAAAAAATTTCCACTTGCTACTGTGATTGAGCCAAGACTTTCACCAAAACTT	
D34-65	TCTACACCTAAAAAATTTCCACTTGCTACTGTGATTGAGCCAAGACTTTCACCAAAACTT	
D181-ACS	TCTACACCTAAAAAATTTCCACTTGCTACTGTGATTGAGCCAAGACTTTCACCAAAACTT *****	
D144-AH1	TACTCTGTTTGA	
D34-65	TACTCTGTTTGA	
D181-ACS	TACTCTGTTTGA *****	

PERCENT IDENTITY OF GROUP 22

	<u>D34-65</u>	<u>D181-ACS</u>	<u>D144-AH1</u>	
D34-65	***	98.4	99.0	SEQ ID No 115
D181-ACS		***	99.0	SEQ ID No 111
D144-AH1			***	SEQ ID No 113

ALIGNMENT OF GROUP 25

D58-AA1	TTGGGCTTGGCAACGGTGCATGTGAATTGATGTTGGCCCGAATGATTCAAGAATTGAA	SEQ ID No 121
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FIGURE 151: COMPARISON OF SEQUENCE GROUPS

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D185-BC1      TTGGGCTTGGCAACGGTGCAATGTGAATTTGATGTTGGCCCGAACGATTCAAGAATTTGAA  SEQ ID No 133
D185-BG2      TTGGGCTTGGCAACGGTGCAATGTGAATTTGATGTTGGCCCGAACGATTCAAGAATTTGAA  SEQ ID No 135
*****

D58-AA1      TGGTCGCTTACCCGAAAAATAGGAAAGTGGATTTTACTGAGAAATTGGAATTTACTGTG
D185-BC1      TGGTCGCTTACCCGAAAAATAGGAAAGTGGATTTTACTGAGAAATTGGAATTTACTGTG
D185-BG2      TGGTCGCTTACCCGAAAAATAGGAAAGTGGATTT-ACTGAGAAATTGGAATTTACTGTG
*****

D58-AA1      GTGATGAAAAATCCTTTAAGAGCTAAGGTCAAGCCAAGATGCAAGTGGTGTA
D185-BC1      GTGATGAAAAACCTTTAAGAGCTAAGGTCAAGCCAAGATGCAAGTGGTGTA
D185-BG2      GTGA-----
****

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PERCENT IDENTITY OF GROUP 25

	<u>D58-AA1</u>	<u>D185-BG2</u>	<u>D185-BC1</u>	
D58-AA1	***	95.9	98.9	SEQ ID No 121
D185-BG2		***	95.1	SEQ ID No 135
D185-BC1			***	SEQ ID No 133

ALIGNMENT OF GROUP 28

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D177-BF7      ATCACATTTGCTAAGTTTGTGAATGAGCTAGCATTGGCAAGATTAATGTTCCATTTTGAT  SEQ ID No 127
D185-BD2      ATCACATTTGCTAAGTTTGTGAATGAGCTAGCATTGGCAAGATTAATGTTCCATTTTGAT  SEQ ID No 139
D185-BE1      ATCACATTTGCTAAGTTTGTGAATGAGCTAGCATTGGCAAGATTAATGTTCCATTTTGAT  SEQ ID No 137
*****

D177-BF7      TTCTCGCTACCAAAAGGAGTTAAGCATGAGGATTTGGACGTGGAGGAAGCTGCTGGAATT
D185-BD2      TTCTCGCTACCAAAAGGAGTTAAGCATGCGGATTTGGACGTGGAGGAAGCTGCTGGAATT
D185-BE1      TTCTCGCTACCAAAAGGAGTTAAGCATGAGGATTTGGACGTGGAGGAAGCTGCTGGAATT
*****

D177-BF7      ACTGTTAGAAGGAAGTTCGCCCTTTTAGCCGTCGCCACTCCATGCTCGTGA
D185-BD2      ACTGTTAGAAGGAAGTTCGCCCTTTTAGCCGTCGCCACTCCATGCTCGTGA
D185-BE1      ACTGTTAGGAGGAAGTTCGCCCTTTTAGCCGTCGCCACTCCATGCTCGTGA
*****

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PERCENT IDENTITY OF GROUP 28

	<u>D177-BF7</u>	<u>D185-BD2</u>	<u>D185-BE1</u>	
D177-BF7	***	99.4	99.4	SEQ ID No 127
D185-BD2		***	98.8	SEQ ID No 139
D185-BE1			***	SEQ ID No 137

ALIGNMENT OF GROUP 30

FIGURE 151: COMPARISON OF SEQUENCE GROUPS

D70A-AA12	ATGTCATTGGTTTAGCTAATCTTTACTTACCATTTGGCTCAATTACTCTATCACTTTGAC	SEQ ID No 131
D176-BF2	ATATCATTTGGTTTGGCTAATGTTTATTTGCCACTAGCTCAATTGTTATATCATTTTGAT	SEQ ID No 85
	** ***** * * * * * * * * * * * * * * * * *	
D70A-AA12	TGGAAACTCCCAACCGGAATCAAGCCAAGAGACTTGGACTTGACCGAATTATCGGGAATA	
D176-BF2	TGGAAACTCCCTACTGGAATCAATTCAAGTGACTTGGACATGACTGAGTCCTCAGGAGTA	
	***** * * * * * * * * * * * * * * * * *	
D70A-AA12	ACTATTGCTAGAAAGGGTGACCTTTACTTAAATGCTACTCCTTATCAACCTTCTCGAGAGTAA	
D176-BF2	ACTTGTGCTAGAAAGAGTGATTATACTTGACTGCTACTCCATATCAACTTTCTCAAGAGTGA	
	** ***** * * * * * * * * * * * * * * * * *	

PERCENT IDENTITY OF GROUP 30

	<u>D176-BF2</u>	<u>D70A-AA12</u>	
D176-BF2	***	77.0	SEQ ID No 85
D70A-AA12		***	SEQ ID No 131

FIGURE 152A: Alignment of Full Length Clones

GROUP 1	ExxRxxP	ExPERF	Gx RxC	ID. No.
D208-AD9	EVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDTFDPERFI	ATDIDFRGOY YKVIPIFGSR RSC SEQ.	299
98.8				
D120-AH4	EVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDTFDPERFI	ATDIDFRGOY YKVIPIFGSR RSC SEQ.	300
97.6				
D121-AA8	EVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDTFDPERFI	ATDIDFRGOY YKVIPIFGSR RSC SEQ.	301
91.6				
D122-AF10	EVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDKFDPERFF	ADDIDYRGQH YEFIPFGSR RSC SEQ.	302
91.6				
D103-AH3	KVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDKFDPERFI	AGDIDFRGHH YEFIPFGSR RSC SEQ.	303
98.8				
D208-AC8	KVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDKFDPERFI	AGDIDFRGHH YEFIPFGSR RSC SEQ.	304
98.8				
D235-AB1	KVRLRYPGP	LLVPHEVND CVVSGYHIPK GTRLFANVMK LQRPDKLWSD PDKFDPERFI	AGDIDFRGHH YEFIPFGSR RSC SEQ.	305
GROUP 2	ExxRxxP	ExPERF	GxRxC	
D244-AD4	ETRLRYPVP	FLLPHEAVQD CKVTGYHIPK GTRLYNWAK VHRDPEIWSK PEKFMNRF	TSKANIDARG QNFEFIPFGS GRRSC SEQ.	306
100.0				
D244-AB6	ETRLRYPVP	FLLPHEAVQD CKVTGYHIPK GTRLYNWAK VHRDPEIWSK PEKFMNRF	TSKANIDARG QNFEFIPFGS GRRSC SEQ.	307
98.8				
D285-AA8	ETRLRFPVP	FLLPHEAVQD CKVTGYHIPK GTRLYNWAK VHRDPEIWSK PEKFMNRF	TSKANIDARG QNFEFIPFGS GRRSC SEQ.	308
100.0				
D285-AB9	ETRLRFPVP	FLLPHEAVQD CKVTGYHIPK GTRLYNWAK VHRDPEIWSK PEKFMNRF	TSKANIDARG QNFEFIPFGS GRRSC SEQ.	309
97.6				
D268-AE2	ETRLRYPVP	FLLPHEAVQD CKVTGYHIPK GTRLYNWAK VHRDPEIWSK PEKFMNRF	TSKANIDARG QNFEFIPFGS GRRSC SEQ.	310
GROUP 3	ExxRxxP	ExPERF	GxRxC	
D100A-AC3	ETFRMYPAGP	LLVPHESEE TTVGGYRVPK GTMLLVNLWA IHNDPKLWDE PRKFKPERFE	GLEGVRDGYK MMFPGSRRS C SEQ.	311
97.6				
D100A-BE2	ETFRMYPAGP	LLVPHESEE TTVGGYRVPK GTMLLVNLWA IHNDPKLWDE PRKFKPERFQ	GLDGVDRGYK MMFPGSRRS C SEQ.	312

FIGURE 152B: Alignment of Full Length Clones

GROUP 4	ExxRxxP	FxPERF	Gx RxC
D205-BG9	ETMRLYTPIP	LLLPHYSTKD CIVEGYDVPK HTMLFVNAWA IHRDPKWEE PDKFKPERFE ATEGETERFN YKLVPFGMR	RAC SEQ. ID. No. 313
100.0			
D205-BE9	ETMRLYTPIP	LLLPHYSTKD CIVEGYDVPK HTMLFVNAWA IHRDPKWEE PDKFKPERFE ATEGETERFN YKLVPFGMR	RAC SEQ. ID. No. 314
100.0			
D205-AH4	ETMRLYTPIP	LLLPHYSTKD CIVEGYDVPK HTMLFVNAWA IHRDPKWEE PDKFKPERFE ATEGETERFN YKLVPFGMR	RAC SEQ. ID. No. 315
GROUP 5	ExxRxxP	FxPERF	Gx RxC
D259-AB9	ETMRLHPVAP	MLVPRECRD IKVAGYDVQK GTRVLVSVWT IGRDPTLWDE PEVFKPERFH EKSIDVKGHD YELLPPGAGR	RMC SEQ. ID. No. 316
100.0			
D257-AE4	ETMRLHPVAP	MLVPRECRD IKVAGYDVQK GTRVLVSVWT IGRDPTLWDE PEVFKPERFH EKSIDVKGHD YELLPPGAGR	RMC SEQ. ID. No. 317
98.8			
D147-AD3	ETMRLHPVAP	MLVPRECRD IKVAGYDVQK GTRVLVSVWT IGRDPTLWDE PEVFKPERFH ERSIDVKGHD YELLPPGAGR	RMC SEQ. ID. No. 318
GROUP 6	ExxRxxP	FxPERF	Gx RxC
D249-AEB	EALRLHPPTP	LMLPHRASAS VKIGGYDIPK GSIHVNVWA VARDPAVWKN PLEFRPERFL EEDVDMKGHD YRLLPPGAGR	RVC SEQ. ID. No. 319
98.8			
D248-AA6	EALRLHPPTP	LMLPHKASAS VKIGGYDIPK GSIHVNVWA VARDPAVWKN PLEFRPERFL EEDVDMKGHD YRLLPPGAGR	RVC SEQ. ID. No. 320
GROUP 7	ExxRxxP	FxPERF	Gx RxC
D233-AG7	ETLRLHPLGT	MLAPHCAIED CNVAGYDIQK GTTFLVNVWT IGRDPKYWDR AOEFILPERFL ENDIDMDGHN FAFLPFGSGR	RRC SEQ. ID. No. 321
98.8			
D224-BD11	ETLRLHPLGT	MLAPHCAIED CNVAGYDIQK GTTFLVNVWT IGRDPKYWDR AOEFILPERFL ENDIDMDGHN FAFLPFGSGR	RRC SEQ. ID. No. 322
100.0			
D224-AF10	ETLRLHPLGT	MLAPHCAIED CNVAGYDIQK GTTFLVNVWT IGRDPKYWDR AOEFILPERFL ENDIDMDGHN FAFLPFGSGR	RRC SEQ. ID. No. 323
GROUP 8	ExxRxxP	FxPERF	Gx RxC
D105-AD6	EVLRLYPAGY	VINRMVNKET KLGNLCLPAG VQLVLPTMLL QHDTEIWGDD AMEFNPERFS DGISKATGK LVFFPFSWGP	RIC SEQ. ID. No. 324
100.0			
D215-AB5	EVLRLYPAGY	VINRMVNKET KLGNLCLPAG VQLVLPTMLL QHDTEIWGDD AMEFNPERFS DGISKATGK LVFFPFSWGP	RIC SEQ. ID. No. 325
95.2			
D135-AE1	EVLRLYPAGY	AINRMVTKET KLGNLCLPAG VQLLLPTILL QHDTEIWGDD AMEFNPERFS DGISKATGK LVFFPFSWGP	RIC SEQ. ID. No. 326

FIGURE 152C: Alignment of Full Length Clones

GROUP 9	ExxRxxp	F*PERF		Gx RxC
D87A-AF3	ESRLYPPIA	TRTRTNEET	KLGEIDLPKG ALLFIPTILL	HLDEKEINGED ADEFNPERFS EGVAKATKCK MTFYFFPGAGP RKC SEQ. ID. No. 327
100.0				
D210-BD4	ESRLYPPIA	TRTRTNEET	KLGEIDLPKG ALLFIPTILL	HLDEKEINGED ADEFNPERFS EGVAKATKCK MTFYFFPGAGP RKC SEQ. ID. No. 328
GROUP 10	ExxRxxp	F*PERF		Gx RxC
D89-AB1	ETLRMHPPIP	LLVPRECMED	TKIDGYNIPF KTRVIVNAWA	IGRDPESWDD PESFMPERFE NSSIDFLGNH HQFIPFGAGR RIC SEQ. ID. No. 329
100.0				
D89-AD2	ETLRMHPPIP	LLVPRECMED	TKIDGYNIPF KTRVIVNAWA	IGRDPESWDD PESFMPERFE NSSIDFLGNH HQFIPFGAGR RIC SEQ. ID. No. 330
100.0				
D163-AG12	ETLRMHPPIP	LLVPRECMED	TKIDGYNIPF KTRVIVNAWA	IGRDPESWDD PESFMPERFE NSSIDFLGNH HQFIPFGAGR RIC SEQ. ID. No. 331
98.8				
D163-AG11	ETLRMHPPIP	LLVPRECMED	TKIDGYNIPF KTRVIVNAWA	IGRDPQSWDD PESFTPERFE NSSIDFLGNH HQFIPFGAGR RIC SEQ. ID. No. 332
100.0				
D163-AF12	ETLRMHPPIP	LLVPRECMED	TKIDGYNIPF KTRVIVNAWA	IGRDPQSWDD PESFTPERFE NSSIDFLGNH HQFIPFGAGR RIC SEQ. ID. No. 333
GROUP 11	ExxRxxp	F*PERF		Gx RxC
D267-AF10	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPI KARVMVNAWA	IGRDPESWED PESFKPERFE NTSVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 334
100.0				
D96-AC2	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPI KARVMVNAWA	IGRDPESWED PESFKPERFE NTSVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 335
100.0				
D96-AB6	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPI KARVMVNAWA	IGRDPESWED PESFKPERFE NTSVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 336
96.4				
D207-AA5	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPL KARVMVNAWA	IGRDPESWED PESFKPERFE NISVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 337
100.0				
D207-AB4	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPL KARVMVNAWA	IGRDPESWED PESFKPERFE NISVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 338
100.0				
D207-AC4	ETLRMHPPVP	LLGPRECRDQ	TEIDGYTVPL KARVMVNAWA	IGRDPESWED PESFKPERFE NISVDLTGNH YQFIPFGSGR RMC SEQ. ID. No. 339
GROUP 12	ExxRxxp	F*PERF		Gx RxC
D98-AG1	ETLRHPPTP	LLVPRECRDQ	TEIEGFTIPL KSKVLVNVWA	IGRDPENWKN PECFIPERFE NSSIEFTGNH FQLLPFGAGR RIC SEQ. ID. No. 340
100.0				
D98-AA1	ETLRHPPTP	LLVPRECRDQ	TEIEGFTIPL KSKVLVNVWA	IGRDPENWKN PECFIPERFE NSSIEFTGNH FQLLPFGAGR RIC SEQ. ID. No. 341

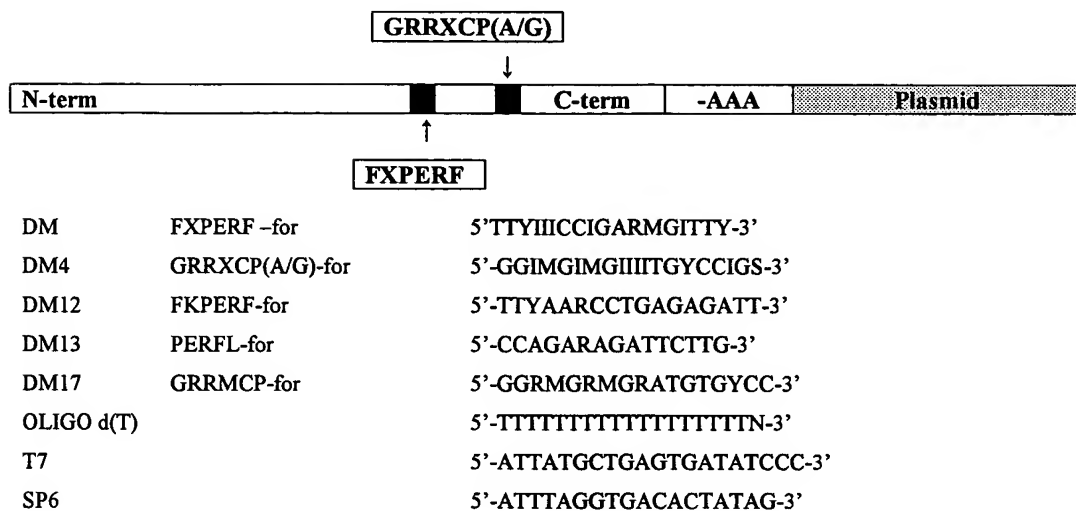
FIGURE 152D: Alignment of Full Length Clones

GROUP 13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</
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FIGURE 152E: Alignment of Full Length Clones

GROUP 17	ExxRxxP	FxPERF	Gx RxC									
D284-AH5	ESLRLYSPVV	SLIRPNEDA	ILGNVSLPEG	VLLSLPVILL	HHDEEIWGKD	-KKFNPERFR	DGVSSATKGQ	VTFPPFTWGP	RIC	SEQ.	ID. No.	356
86.7												
D110-AF12	ESLRLYPPVV	TLTRRPKEDT	VLGDVSLPAG	VLLSLPVILL	HHDEEIWGKD	AKKFKPERFR	DGVSSATKGQ	VTFPPFTWGP	RIC	SEQ.	ID. No.	357

Figure 153: Cloning of Cytochrome P450 cDNA Fragments by PCR



I = DeoxylInosine; Y = C, T; M = A,C; R = A,G; S = C,G; N= A,T,C,G